

## Ground Segment

**Summary ID:** 269

**Last Author:** mkelly

**Last Update:** 2003-Jul-15 07:01

**IPT:** Ground Segment

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

**Title:** Outstanding forward-thinking efforts on Receptor Siting and NSOF ICD Development

**Summary:** The receptor siting working group shows recognition of and a strong, focused effort to address a critical long-range program problem.

Mark Hyde and Colin Connor's conscientious and well-prepared efforts to provide data for NSOF development and ICD issues have earned the respect of NSOF personnel and brought credibility to the program team.

**Support:** 488/C3/Management: Shared Ownership\nmWenkel/2003-May-27 16:02(S:A)

543/C3/Technical: Interface Control Documents\njnmvalenti/2003-Jun-25 13:55(S:A)

617/C3/Technical: Interface Control Documents\ndaveneurauter/2003-Jul-11 10:33(S:A)

**Summary ID:** 309

**Last Author:** mkelly

**Last Update:** 2003-Jul-15 08:06

**IPT:** Ground Segment

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

**Title:** Excellent Kickoff for Field Terminal Forum

**Summary:** The first Field Terminal Forum generated significant positive feedback from the FT user and developer communities. We look forward to your continued efforts to develop this forum into an effective tool for defining, refining, and advocating your FT software package as well as helping the community with their FT development efforts.

**Support:** 336/IDPS/Management: Shared

Ownership\njnmulligan/2003-Apr-01  
07:11(S:A)

**Summary ID:** 270

**Last Author:** mkelly

**Last Update:** 2003-Jul-15 07:00

**IPT:** Ground Segment

**Criteria:** Management/Management Processes

**Inclination:** Strength

**Title:** Effective use of 6-Sigma and  
Communications Processes

**Summary:** The 6-sigma project to evaluate SafetyNet  
receptor siting locations is a strong positive  
application of the 6-sigma management  
process.

The C3S preliminary design audit, while  
not contractually required, proved to be  
very valuable to the IPO as a means of  
understanding C3S work accomplished  
since ATP. This was an effective  
communication process.

**Support:** 489/C3/Management: Management  
Processes\nMWenkel/2003-May-27  
16:10(S:A)

507/C3/Management: Management  
Processes\nMWenkel/2003-May-28  
12:48(S:A)

**Summary ID:** 267

**Last Author:** mkelly

**Last Update:** 2003-Jul-14 21:25

**IPT:** Ground Segment

**Criteria:** Management/Responsiveness

**Inclination:** Strength

**Title:** C3S Very Responsive to Cost Inquiries

**Summary:** The C3S IPT continues to be very  
responsive to requests for cost information.

Access to lower-level data supporting  
EVMS conclusions and replan BOEs has  
been exemplary.

The telecon to explain FVS cost and  
schedule changes was particularly notable -  
Ellen Ryan from NGST did an excellent  
job clarifying these changes.

**Support:** 403/C3/Cost: IPT Financial  
Management\ncwheeler/2003-Apr-25  
10:39(S:U)

429/C3/Cost: IPT Financial  
Management\ncwheeler/2003-May-09  
11:09(S:U)

536/C3/Management:  
Responsiveness\nMWenkel/2003-Jun-19  
16:50(S:A)

**Summary ID:** 307

**Last Author:** mkelly

**Last Update:** 2003-Jul-15 08:11

**IPT:** Ground Segment

**Criteria:** Management/Shared Ownership

**Inclination:** Weakness

**Title:** Weak Leadership in Resolving  
Data-Related Issues

**Summary:** Although the team members are enthusiastic and hardworking, resolution of data-related issues such as time and coordinate systems, units for reporting results, calibration processes, algorithm integrity, and graceful degradation has bogged down. When decisions are made, some seem to be made based on cost and expediency without supporting technical analysis and rationale. The team seems reluctant to take a leadership role, perform appropriate analysis, and derive associated requirements without prodding from the government and user community.

Ancillary Data approach documented in ICDs puts complete reliance on NESDIS to provide ancillary data and does not take ownership of performance and data availability responsibility.

**Support:** 506/IDPS/Technical: OPSCONs and  
Architectures\nbmunley/2003-May-28  
11:11(S:A)

588/IDPS/Management: Shared  
Ownership\nagoldber/2003-Jul-10  
07:43(S:A)

592/IDPS/Management: Shared  
Ownership\nagoldber/2003-Jul-10  
14:06(W:A)

**Summary ID:** 272

**Last Author:** mkelly

**Last Update:** 2003-Jul-15 07:58

**IPT:** Ground Segment

**Criteria:** Technical/OPSCONs and Architectures

**Inclination:** Strength

**Title:** Excellent C3S VCDU Architecture Study, Strong Emphasis on OPSCON Scenario Work

**Summary:** Excellent C3S design study on VCDU rollover handling architecture. Selected solution resolved the issue and provides beneficial flexibility to support high-VCDU-rollover data streams from P3I or multimission sources.

Good work continues on developing the OpsCon with lots of OpsCon Scenario Reviews. We look forward to the completion of the OpsCon, and the resulting final flowdown of requirements to the lowest levels. Overall, we are impressed with the amount of effort the C3S and IDPS IPTs are placing on the scenario work and associated flowdown of requirements.

Excellent IDPS architecture briefing by Milt Panas at the July IDPS Face-to-Face meeting

**Support:** 433/C3/Technical: OPSCONs and Architectures\ncwolejsza/2003-May-09 14:26(S:A)

491/C3/Technical: OPSCONs and Architectures\nMWenkel/2003-May-27 16:39(S:A)

505/C3/Technical: OPSCONs and Architectures\ncwolejsza/2003-May-28 11:07(S:U)

520/IDPS/Technical: OPSCONs and Architectures\nnbaker/2003-Jun-05 16:21(S:A)

521/C3/Technical: OPSCONs and Architectures\nnbaker/2003-Jun-05 16:33(S:A)

618/IDPS/Technical: OPSCONs and Architectures\njkzajic/2003-Jul-11 12:00(S:A)

**Summary ID:** 311

**Last Author:** mkelly

**Last Update:** 2003-Jul-15 07:52

**IPT:** Ground Segment

**Criteria:** Technical/Hardware, Software, and Algorithm Design

**Inclination:** Strength

**Title:** Outstanding Effort to Minimize Build 1.1 Code Volume

**Summary:** DMS and INF Software Items for IDPS Build 1.1 were completed with all required functionality at approximately 1/2 the amount of code originally estimated. This reduced code count can reduce software maintenance costs for the life of the program.

**Support:** 556/IDPS/Technical: Hardware, Software, and Algorithm Design\ndhammond/2003-Jun-27 13:14(S:A)

**Summary ID:** 306

**Last Author:** mkelly

**Last Update:** 2003-Jul-15 09:19

**IPT:** Ground Segment

**Criteria:** Technical/Requirements Derivation

**Inclination:** Weakness

**Title:** Limited/Superficial Analysis Supporting Derived Requirements

**Summary:** Anticipated incidence rates for various types of anomalies, such as spacecraft failures, outages, anomalies, or other non-nominal situations (e.g., orbit maneuvers); missed passes and link drop-outs; terrestrial comm failures; loss of mandatory ancillary data with acceptable quality; and local ground equipment and facilities failures have not been quantified. This provides limited ability to assess the adequacy of remedial measures and to meaningfully estimate data availability performance.

Data rate and processing sizing estimates appear to lack rigor - there seems to be limited analysis related to estimates for geolocation data and data flags or the impact of graceful degradation or LUT generation. No apparent effort to consider deriving compression requirements to minimize life-cycle costs associated with data volume, and limited/delayed effort to identify cal/val requirements.

These flaws cast doubt on derived hardware sizing requirements presented in NPP dCDR documents.

**Support:** 566/IDPS/Technical: Requirements Derivation\nagoldber/2003-Jul-06 17:27(W:A)

567/IDPS/Technical: Requirements Derivation\nagoldber/2003-Jul-06 17:49(W:A)

593/IDPS/Management: Risk Management\nagoldber/2003-Jul-10 14:10(W:A)

**Summary ID:** 314  
**Last Author:** mkelly  
**Last Update:** 2003-Jul-17 09:01  
**IPT:** Ground Segment  
**Criteria:** Technical/Performance  
**Inclination:** Weakness  
**Title:** Potentially Costly Separate Algorithm Baselines  
**Summary:** IDPS and SE will maintain separate operational and science code. The effort required to ensure both segments are analyzing and reporting performance against compatible algorithm baselines is likely to be both time-consuming and costly. There is also significant potential for confusion outside the IDPS/SEI team regarding which set of code system performance is being assessed and reported against.  
  
Recommend establishing a single "control" algorithm baseline against which performance is reported and clearly establish the point at which the control baseline and associated performance reporting transitions from the science code to operational code.  
  
**Support:** 620/IDPS/Technical: OPSCONs and Architectures\njkzajic/2003-Jul-11 12:21(W:A)  
  
**Summary ID:** 288  
**Last Author:** mkelly  
**Last Update:** 2003-Jul-14 21:47  
**IPT:** Ground Segment  
**Criteria:** Cost/Cost Control  
**Inclination:** Strength  
**Title:** Proactive Cost Control in C3S  
**Summary:** DRR and MMC elements are proactively working to control long-term O&S costs by exploiting as much of the facility infrastructure as possible at NSOF, such as use of existing telephony switching equipment and cabling infrastructure.  
  
**Support:** 420/C3/Cost: Cost Control\njmvalenti/2003-May-08 15:36(S:A)  
  
421/C3/Cost: Cost Control\njmvalenti/2003-May-08 15:39(S:A)

**Summary ID:** 315  
**Last Author:** mkelly  
**Last Update:** 2003-Jul-15 08:24  
**IPT:** Ground Segment  
**Criteria:** Cost/Program Changes  
**Inclination:** Weakness  
**Title:** Raytheon/NGST Cost/Pricing Teams Unaccustomed to SSPR Interaction  
**Summary:** While IPT cost teams were quite open and cooperative during the replan effort, the Raytheon and NGST pricing teams did not appear to understand or be accustomed to direct and open interaction with the government. This appears to be improving, recommend continued coaching of this team on shared ownership methods and approaches  
**Support:** 549/IDPS/Cost: Program Changes\nTBiederman/2003-Jun-25 17:41(S:A)  
551/IDPS/Cost: Program Changes\nTBiederman/2003-Jun-25 18:10(S:A)  
552/IDPS/Cost: Program Changes\nTBiederman/2003-Jun-25 18:24(W:A)  
**Summary ID:** 340  
**Last Author:** mkelly  
**Last Update:** 2003-Jul-18 08:55  
**IPT:** Ground Segment  
**Criteria:** Summary/Conclusion  
**Inclination:** Strength  
**Title:** GSIPT Impressions at Midterm  
**Summary:** We continue to be pleased with Raytheon's efforts to execute their baseline, the open manner in which the IPTs conduct business, and the spirit of cooperation within the teams.  
We have lingering concerns regarding the tentative manner in which cross-IPT issues are being addressed, and have some concern that insufficient rigor is being applied to assessing off-nominal conditions and segment- and system-level budgets.  
EDR performance reporting must be clearly tied to a single software baseline.  
The ICD performance exclusions regarding

ancillary data must be corrected.

## Management

**Summary ID:** 224

**Last Author:** dfurlong

**Last Update:** 2003-Jul-17 08:49

**IPT:** Management

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

**Title:** Transition from JEDI to E-Rooms

**Summary:** The transition from JEDI to E-Rooms was well executed. Like all transitions, some bumps in the road did occur and the team was able to work through them. A good example of six sigma researching a problem followed by evaluation of options, decision by program management, and implementation.

**Support:** 569/Management/Management: Shared Ownership\nmccowan/2003-Jul-07 13:31(? :A)

570/Management/Management: Shared Ownership\nmccowan/2003-Jul-07 13:42(S:A)

**Summary ID:** 261

**Last Author:** dfurlong

**Last Update:** 2003-Jul-17 08:46

**IPT:** Management

**Criteria:** Management/Change Management Process

**Inclination:** Strength

**Title:** Use of NPOESS CCR by NGST speeds change review at IPO

**Summary:** This allows the IPO to avoid re-keying ECP information into the CCR system. Data entry errors will be avoided and turn around time for processing of ECPs by the Government NPOESS Configuration Control Boards will be shortened.

**Support:** 438/Management/Management: Change Management Process\nmbacree/2003-May-14 09:43(S:A)

**Summary ID:** 308

**Last Author:** dfurlong

**Last Update:** 2003-Jul-17 08:47



<b>IPT:</b>	Management
<b>Criteria:</b>	Management/Resource Allocation
<b>Inclination:</b>	Strength
<b>Title:</b>	NGST support to AF CAIG and EXCOM request has been outstanding
<b>Summary:</b>	NGST support to the AF CAIG has been outstanding. NGST has assisted in addressing the key ICE concerns and allowing the IPO to reduce the cost risk differentials. In addition, support to NPOESS EXCOM has allowed for the most recent and accurate data to be presented.
<b>Support:</b>	477/Management/Management: Responsiveness\ndfurlong/2003-May-22 15:21(S:A)
<b>Summary ID:</b>	310
<b>Last Author:</b>	dfurlong
<b>Last Update:</b>	2003-Jul-17 08:47
<b>IPT:</b>	Management
<b>Criteria:</b>	Management/Resource Allocation
<b>Inclination:</b>	Weakness
<b>Title:</b>	SSPR has not fully demonstrated requirement flowdown of pre-8500
<b>Summary:</b>	<p>Focus on "new" 8500 security requirements detracted from from above effort to understand the 5200 requirements flowdown. Due to this lack of traceability insight, we were unable to determine "true" requirement delta between baseline and "new" security requirements.</p> <p>Concerns that definition of all security requirements is not on a fast enough timeline to affect NPP design remain. Current schedule for security requirement definition completion is mid-Dec while NPP design is scheduled to be finalized in Oct.</p> <p>Corrective Action: Until recently, the SSPR appears to have waited for IPO direction on security matters. SSPR has heeded this concern and is now taking initiative on deriving security requirements, implementing safeguards, and contacting DAAs.</p>
<b>Support:</b>	<p>571/Security/Management: Resource Allocation\nMSorrells/2003-Jul-07 13:42(S:A)</p> <p>572/Security/Management: Resource Allocation\nMSorrells/2003-Jul-07</p>

13:44(W:A)

635/Security/Management: Resource  
Allocation\ndfurlong/2003-Jul-16  
07:29(W:U)

**Summary ID:** 336

**Last Author:** dfurlong

**Last Update:** 2003-Jul-17 11:14

**IPT:** Management

**Criteria:** Management/Intra and Inter IPT  
Communication

**Inclination:** Weakness

**Title:** NGST and IPO must assure successful  
completion of NPP CDR

**Summary:** Prior to the NPP Spacecraft CDR, NGST  
Giver Reciever telecons resulted in  
significant disconnects between NPOESS  
and NPP. NGST has continued to work the  
item and significant but disconnects  
remain.

ICD development continues to be a majort  
challenge.

Corrective Action:  
SEI needs to take a stronger leadership  
position in NPP integration

**Support:** 422/NPP Management/Management:  
Shared Ownership\nawebb/2003-May-08  
16:07(S:A)

423/NPP Management/Management:  
Shared Ownership\nawebb/2003-May-08  
16:15(S:A)

424/NPP Management/Management:  
Shared Ownership\nawebb/2003-May-08  
16:20(S:U)

425/NPP Management/Management:  
Shared Ownership\nawebb/2003-May-08  
16:24(S:U)

441/NPP Management/Management:  
Shared Ownership\nawebb/2003-May-19  
14:51(S:U)

442/NPP Management/Management:  
Shared Ownership\nawebb/2003-May-19  
15:10(S:U)

487/NPP Management/Management:  
Shared Ownership\nawebb/2003-May-27  
15:25(S:U)

**Summary ID:** 289

**Last Author:** dfurlong  
**Last Update:** 2003-Jul-17 11:12  
**IPT:** Management  
**Criteria:** Management/Responsiveness  
**Inclination:** Weakness  
**Title:** Coordination with IPO Mgmt in the Replan proposal preparation was untimely and unacceptable  
**Summary:** NGST did not perform to the replan schedule that was agreed upon prior to the beginning of this Award Fee period.  
  
IMPACT: IPO recieved limited and vague reporting of Replan progress and less confidence in cost estimates used to supply information to EXCOM decision makers. The lack of hard proposal values and accompanying insight into the details behind the totals has stressed the IPO reporting process, limited their flexibility, and weakened budget positions. This could lead to flawed program budgeting inputs to the respective agency Program Control and Financial Management functional groups.  
  
Corrective Action: Closer coordination between NGST and IPO Replan leads is required.  
**Support:** 587/Management/Management: Responsiveness\nssimione/2003-Jul-10 00:28(W:A)  
**Summary ID:** 220  
**Last Author:** dfurlong  
**Last Update:** 2003-Jul-17 11:13  
**IPT:** Management  
**Criteria:** Technical/Hardware, Software, and Algorithm Design  
**Inclination:** Strength  
**Title:** SDP preparation progressing well  
**Summary:** The work on the SDP is continuing with a significant effort by both NGST and Raytheon. The IPO looks forward to final signature of the SDP in Sep 03'  
  
The Northrop Grumman Software Development Plan is currently being updated with an expected approval date of early Fall 2003. Even though the CDRL will not be approved for several months, its provisions are already in effect. The current software development effort is making appropriate progress. NGST is substantially following the SDP-defined process.

Both Northrop and Raytheon software development efforts are being led by experienced software management.

There is an active and strong Software Quality Assurance oversight at both contractors and the Government is very involved in all of the development activities.

**Support:** 577/Software/Technical: Hardware, Software, and Algorithm  
Design\npwofsy/2003-Jul-07 15:11(S:U)

**Summary ID:** 335

**Last Author:** dfurlong

**Last Update:** 2003-Jul-17 11:10

**IPT:** Management

**Criteria:** Cost/Cost Control

**Inclination:** Strength

**Title:** Efforts to control subcontractor cost has produced mixed results

**Summary:** ITT cost control has been making significant technical progress. Sensor development with Scene Selection Module (SSM) and vibration isolation system is noteworthy.

SBRS, CMIS, OMPS, and 1394 all have significant cost control challenges and technical concerns.

**Support:** 636/Management/Cost: Cost Control\ndfurlong/2003-Jul-16 09:55(S:A)

**Summary ID:** 266

**Last Author:** dfurlong

**Last Update:** 2003-Jul-17 11:11

**IPT:** Management

**Criteria:** Cost/Reports

**Inclination:** Weakness

**Title:** Cost Reports from NGST and Sensor Subcontractors lack detailed technical explanations

**Summary:** Sensor cost reports from the NGST are frequently a pass through with little specific explanation of variances. When discussing the CPR data the IPO IMs lack detail from either sensor subs or NGST on specific cost and schedule variances.

Corrective Actions  
- More detailed explanation of variances

from the sensor subcontractors with value added comments from the NGST sensor managers are required.

**Support:** 470/Management/Cost:  
Reports\ndfurlong/2003-May-22  
14:36(W:A)

**Summary ID:** 291

**Last Author:** dfurlong

**Last Update:** 2003-Jul-17 08:04

**IPT:** Management

**Criteria:** Rollover/Rollover

**Inclination:** Weakness

**Title:** \$1.4M roll over from Period 1 has stalled since Payload IPT Offsite

**Summary:** Significant work was done initially on the roll over. However, We need to develop metrics and improve communications down to the sensor subcontractors

- Good initial start
- Need to improve communications to sensor subcontracts
- Establish a metrics for improved communications

Current assessment is \$1.4 M will not be earned at the end of this period.

Corrective Actions:  

- Need to improve communications to sensor subcontracts
- Establish a metrics for improved communications

**Support:** 474/Management/Management: Meeting Preparation\ndfurlong/2003-May-22  
15:03(S:A)

632/Management/Rollover:  
Rollover\ndfurlong/2003-Jul-15  
14:20(W:A)

## O&S

**Summary ID:** 275

**Last Author:** mlee

**Last Update:** 2003-Jul-15 11:13

**IPT:** O&S

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

**Title:** O&S supported replan very well.

**Summary:** O & S supported replan very well. The shoulder-to-shoulder approach was well coordinated and truly served to get government buy-in. The subsequent presentations were well received by the IPO management.

**Support:** 523/GO&S/Management: Shared Ownership\nCTIGNOR/2003-Jun-05 17:00(S:A)

537/GO&S/Management: Shared Ownership\nCTIGNOR/2003-Jun-23 18:11(S:A)

**Summary ID:** 273

**Last Author:** mlee

**Last Update:** 2003-Jul-15 11:10

**IPT:** O&S

**Criteria:** Management/Meeting Preparation

**Inclination:** Strength

**Title:** O&S IPT has provided excellent meeting coordination/preparation

**Summary:** O&S IPT is facilitating NPP coordination/integration. Terry Watson has taken the lead to set up a Mission Operations Working Group (MOWG) with NASA, as well as to solicate inputs and establish an agenda

Both the Flight Operations and Ground Operations IPTs contributed greatly to the C3S Face to Face in May. A better C3S understanding of O&S concerns should result. Tom Baugh in particular provided an excellent overview of operations.

The contractor participated in a 2-day ILSWG meeting during which 20 contractor and Government employees visited NASA's EOS and the DMSP programs for lessons learned info.

The ILSWG set-up and executed a Technical Documentation Management meeting at Aurora, during the May C3S F2F. The meeting was very productive as important issues were uncovered.

**Support:** 482/FO&S/Management: Meeting Preparation\nmlee/2003-May-23 09:37(S:A)

483/FO&S/Management: Meeting Preparation\nmlee/2003-May-23 09:38(S:A)

524/ILS/Management: Management  
Processes\nmrosario/2003-Jun-11  
08:45(S:A)

525/ILS/Management: Management  
Processes\nmrosario/2003-Jun-11  
10:14(S:A)

538/FO&S/Management: Meeting  
Preparation\naopperman/2003-Jun-24  
12:58(S:A)

**Summary ID:** 274

**Last Author:** mlee

**Last Update:** 2003-Jul-15 11:15

**IPT:** O&S

**Criteria:** Technical/Requirements Derivation

**Inclination:** Strength

**Title:** ILS process/tool definition for NPOESS  
has shown great progress.

**Summary:** ILS Conference coordination was a major  
item and has progressed extremely well.  
ILS process/tool definition for NPOESS  
has shown great progress.

**Support:** 435/ILS/Technical: Interface Control  
Documents\ndaveneurauter/2003-May-09  
20:23(S:A)

524/ILS/Management: Management  
Processes\nmrosario/2003-Jun-11  
08:45(S:A)

525/ILS/Management: Management  
Processes\nmrosario/2003-Jun-11  
10:14(S:A)

**Summary ID:** 281

**Last Author:** mlee

**Last Update:** 2003-Jul-15 11:06

**IPT:** O&S

**Criteria:** Cost/Reports

**Inclination:** Strength

**Title:** Ground O&S IPT Business Operations has  
worked well with the IPO on the  
Independent Cost Estimate.

**Summary:** Barbara Weaver of Raytheon's Business  
Operations team has worked well with the  
IPO to provide information related to  
Ground O&S as well as information to the  
Air Force Cost Analysis Agency for the  
Independent Cost Estimate.

**Support:** 404/GO&S/Cost: IPT Financial  
Management\ncwheeler/2003-Apr-25

10:40(S:A)

**Summary ID:** 276**Last Author:** mlee**Last Update:** 2003-Jul-18 15:18**IPT:** O&S**Criteria:** Cost/Program Changes**Inclination:** Weakness**Title:** Contractor Cost/Pricing O&S Teams  
Unaccustomed to SSPR Interaction**Summary:** NGST Pricing Operations has not shown the shared ownership of the replan process that is expected of the integrator of the total proposal. The FOS and GOS IPTs operated under different definition of Categories Two and Three. NGST needs to clearly establish the rules for the proposal and enforce uniform discipline on the CAMs and other managers in the process both within NGST and at Raytheon.**Support:** 547/FO&S/Cost: Program  
Changes\nTBiederman/2003-Jun-25  
17:36(W:A)

## Space Segment

**Summary ID:** 231**Last Author:** hbloom**Last Update:** 2003-Jul-15 10:55**IPT:** Space Segment**Criteria:** Management/Shared Ownership**Inclination:** Strength**Title:** Great Teamwork during Replan**Summary:** All of the members of the Spacecraft IPT have worked really well together as evidenced by the great working relationship demonstrated during the replan face-to-face meeting. This included incorporating Goddard SFC experts into the mix.**Support:** 578/Spacecraft/Management: Shared  
Ownership\nnkfricks/2003-Jul-07  
16:42(S:A)**Summary ID:** 245**Last Author:** hbloom**Last Update:** 2003-Jul-15 10:00**IPT:** Space Segment



**Criteria:** Management/Management Tools  
**Inclination:** Strength  
**Title:** CrIS " wall walk " tool should be used by other sensors  
**Summary:** During the payload offsite, one sensor team briefed us all on a tool they have begun to use to get their sensor under control. Recommend the Payload IPT establish this as the norm.  
**Support:** 582/Payload/Management: Management Tools\nmhaas/2003-Jul-08 14:29(S:U)  
**Summary ID:** 226  
**Last Author:** hbloom  
**Last Update:** 2003-Jul-15 10:32  
**IPT:** Space Segment

**Criteria:** Management/Meeting Preparation  
**Inclination:** Strength  
**Title:** Productive and Efficient Meetings  
**Summary:** Spacecraft team members have consistently been well prepared to conduct meetings and therefore the business of the program. Their attention to detail has allowed the IPT conduct more productive and efficient meetings.  
 Example:  
 Jim Nelson and his team did a great job presenting data for the 1394 ECP 3 Fact Finding Meeting. The info he presented was exactly what we asked for and in many cases the changes that had been done cooresponded to government concerns ahead of the game. Appears that he is on top of 1394, knowing eactly where he is regarding actuals vs plan.  
**Support:** 527/Spacecraft/Management: Meeting Preparation\nvchambers/2003-Jun-12 17:04(S:A)  
 539/Spacecraft/Management: Meeting Preparation\nmlee/2003-Jun-24 14:42(S:A)  
**Summary ID:** 243  
**Last Author:** hbloom  
**Last Update:** 2003-Jul-18 07:53  
**IPT:** Space Segment  
**Criteria:** Management/Intra and Inter IPT Communication  
**Inclination:** Weakness

<b>Title:</b>	IPT coordination and communication lacking
<b>Summary:</b>	<p>NGST has built an IPT structure that nominally addresses all technical areas and nominally includes the appropriate internal and external interfaces. However, NGST performance to date gives the impression that the IPTs operate with inadequate coordination and communication.</p> <p>Examples:  Technical issues appear to languish without resolution. When the cost becomes an issues, the option is usually eliminated. I end up having to suggest completing a valid CAIV trade. ( e.g VIIRS Bridge chip, CrIS SV power).</p> <p>The overall Sys. Eng. process does not appear to be adhered too. ( eg. Cris SVI power, OMPS contamination- *new). ITT working towards survival power increase as directed by NGST, but NGST has not boarded this chnage at the sys. Eng. level. In addition , since this is a class-1 change, the IPO/NASA has not approved the change as well.</p> <p>Slow progress and problem solving from NGST in the VIIRS cal/val area to date. Within NGST, cal/val issues are recognized, understood, appreciated, assigned to an appropriate IPT, and proposed actions are documented, with the caveat that program cost/schedule constraints may preclude or limit implementation.</p> <p>NGST response to the IPO request for EDR impacts of the MIB redesign are slow and lacking. Results of an analysis so far are based on ad hoc assumptions about changes in sensor performance unjustified by any technical rationale.</p> <p>The flowdown of the tasking to evaluate the potential programmatic impacts of the DOD 8500 series (security) to space segment IPT members was incomplete. The estimates for impact to date have no clear factual basis and did not show an understanding of the 8500 series requirements</p> <p>Corrective action:  The NGST System Performance IPT should have provided the leadership to bring together the resources within NGST needed to provide an adequate technical response, or should have deferred a response until the necessary work could be accomplished.</p> <p>.</p>
<b>Support:</b>	449/Payload/Management: Management

Processes\nhswenson/2003-May-21  
11:21(W:U)

451/Payload/Management: Management  
Processes\nhswenson/2003-May-21  
11:30(S:U)

456/Space Segment/Management: Intra  
and Inter IPT  
Communication\nndemidovich/2003-May-  
21 23:37(W:U)

645/Systems Engineering and  
Integration/Management: NPP Program  
Support\nJaniceKSmith/2003-Jul-17  
18:09(W:U)

646/Systems Engineering and  
Integration/Management: NPP Program  
Support\nJaniceKSmith/2003-Jul-17  
18:44(W:U)

**Summary ID:** 227

**Last Author:** hbloom

**Last Update:** 2003-Jul-17 16:21

**IPT:** Space Segment

**Criteria:** Technical/Performance

**Inclination:** Strength

**Title:** Spacecraft IPT Focused on Success

**Summary:** Spacecraft team members have demonstrated a willingness to take responsibility for the success of the program by tackling issues with a program wide view. Innovative ways to solve these issues have been employed.

Examples:

IPO expressed a concern that Precision Orbit Determination (POD) requirements might impact flight hardware specifications. Robert Kendzlic moved the POD scenario process forward in time. Then, realizing the scope of the subject, set up a POD forum in Lanham, MD.

IPO expressed concerns on the completeness of derived requirements resulting from Autonomy and Fault Management. The NGST Autonomy/FM lead Ellen Ryan quickly took advantage of IPO travel to NGST for the Replan Kickoff and set up an excellent and informative splinter with IPO FO IPT members, NGST FO IPT members, and the ACS lead for NGST.

Peter Quast has shown initiative in working trade study issues and researching potential solutions for the NPOESS GPS requirements

**Support:** 415/Spacecraft/Technical: Requirements Derivation\nmlee/2003-May-08 11:19(S:A)

416/Spacecraft/Technical: Requirements Derivation\nmlee/2003-May-08 11:27(S:A)

526/Spacecraft/Technical: Trade Studies and Analysis\nvchambers/2003-Jun-12 16:57(S:A)

540/Spacecraft/Management: Meeting Preparation\nmlee/2003-Jun-24 15:00(S:A)

559/Spacecraft/Management: Risk Management\ncnaegeli/2003-Jun-30 09:31(S:A)

**Summary ID:** 230

**Last Author:** hbloom

**Last Update:** 2003-Jul-15 10:37

**IPT:** Space Segment

**Criteria:** Technical/Trade Studies and Analysis

**Inclination:** Strength

**Title:** NGST S/C team proactive and Employing Tools for Success

**Summary:** NGST is properly using technical and management tools to identify potential issues before they cause problem. NGST is being proactive.

Space Craft IPT continues to support System Integration monitoring and development of Space Segment Program Technical Performance Measures (TPM). Mass and Power proposed requirements changes associated with the payload state of maturity are being evaluated and assessed in regard to the baseline spacecraft design.

Coordination work is being made in NPP SIIS and Instrument Acquisition from an I&T perspective. NGST has taken the lead in the development of the giver/receiver list for NPP program.

**Support:** 486/Spacecraft/Technical: Performance\ncnaegeli/2003-May-27 14:23(S:A)

560/Spacecraft/Management: NPP Program Support\ncnaegeli/2003-Jun-30 09:37(S:A)

**Summary ID:** 248

**Last Author:** hbloom  
**Last Update:** 2003-Jul-15 09:56  
**IPT:** Space Segment  
**Criteria:** Technical/Hardware, Software, and Algorithm Design  
**Inclination:** Strength  
**Title:** CrIS Technical performance is Excellent  
**Summary:** ITTs development of the CrIS SSM has been highly successful. ITT has successfully demonstrated their initial design capability very quickly. ITT has also made very good use of EDU#2 to evaluate system level performance and identifying a number of significant design deficiencies  
**Support:** 444/Payload/Technical: Hardware, Software, and Algorithm Design\naschwalb/2003-May-21 07:14(S:U)  
461/Payload/Technical: Hardware, Software, and Algorithm Design\nncmuth/2003-May-22 09:27(S:U)  
**Summary ID:** 316  
**Last Author:** hbloom  
**Last Update:** 2003-Jul-15 10:51  
**IPT:** Space Segment  
**Criteria:** Technical/Specifications  
**Inclination:** Weakness  
**Title:** Spec configuration issues may be causing programatic impacts  
**Summary:** Some elements of CMIS schedule are delayed due to non-reply and/or mis-directed application by NGST of pending ICSRs from CMIS contractor. These clarifications/data requests are mentioned by the sensor contractor each time during the weekly telecons with NGST. Some of these ICSRs goes back to November of 2002.  
The EMI/EMC Control Plan was originally taken to the ECR as a "Class 2" ECP. It did not take into account the GFE Payloads (SARSAT and ADCS) which have interfaces under government control and thus should have been a "Class 1".  
**Support:** 467/Space Segment/Technical: Specifications\nndemidovich/2003-May-22 12:04(W:U)

492/Payload/Technical:  
Specifications\nnchauhan/2003-May-27  
16:44(W:U)

**Summary ID:** 247

**Last Author:** hbloom

**Last Update:** 2003-Jul-15 10:10

**IPT:** Space Segment

**Criteria:** Technical/Interface Control Documents

**Inclination:** Weakness

**Title:** ICD Responses still lacking for NPP

**Summary:** Lack of response in providing information needed for the NPP VIIRS ICD; there is sound and fury to remedy this, but have not seen the evidence as of this writing. There are several planned ICD meetings with the sensors during the summer that may remedy this.

**Support:** 533/Payload/Technical: Interface Control Documents\nJaniceKSmith/2003-Jun-17 17:09(W:U)

642/Systems Integration/Management:  
NPP Program  
Support\nJaniceKSmith/2003-Jul-17  
17:02(S:U)

**Summary ID:** 246

**Last Author:** hbloom

**Last Update:** 2003-Jul-15 09:49

**IPT:** Space Segment

**Criteria:** Cost/EVMS Data

**Inclination:** Weakness

**Title:** NGST Sensor Format 5 Analysis Needs Improvement

**Summary:** The NGST CMIS management team should be adding value to the BSS CMIS EVMS data (CPR, Format 5) reported to the IPO. This has mostly been a pass-through.

**Support:** 591/Payload/Cost: EVMS Data\njjjewell/2003-Jul-10 13:32(W:U)

**Summary ID:** 250

**Last Author:** hbloom

**Last Update:** 2003-Jul-15 14:13

**IPT:** Space Segment

<b>Criteria:</b>	Cost/Program Changes
<b>Inclination:</b>	Weakness
<b>Title:</b>	VIIRS schedules not tied to EVMS
<b>Summary:</b>	<p>Raytheon SBRS rarely uses schedules in their TIMs and QPMRs. Raytheon SBRS has also failed to use the schedule with a tie to EVMS progress as well. When schedules are shown, sometimes they do not reflect the current baseline with appropriate schedule impacts. Generally, the schedule is "new" to the government.</p> <p>VIIRS is on the critical path to NPP success. There are many supply chain, ICDs/accommodation to Ball and performance issues and EVMS is a great tool to capture these issues.</p>
<b>Support:</b>	<p>447/Payload/Cost: Program Changes\nhswenson/2003-May-21 11:13(S:U)</p> <p>464/Payload/Cost: Program Changes\nhswenson/2003-May-22 11:02(W:U)</p>
<b>Summary ID:</b>	321
<b>Last Author:</b>	hbloom
<b>Last Update:</b>	2003-Jul-15 14:46
<b>IPT:</b>	Space Segment
<b>Criteria:</b>	Summary/Conclusion
<b>Inclination:</b>	Strength
<b>Title:</b>	Space Segment "take away" management Strength
<b>Summary:</b>	<p>Shared Ownership Process has improved within the Payload Team as evidenced by CrIS improvements (replan S-T-S activities and P/L offsite)</p> <p>P/L offsite has created the opportunity to strengthen the entire P/L effort by using what works ( management tools) on other programs ( e.g. CrIS wall walk)</p> <p>Meeting preparation has been well done, specifically in the Spacecraft IPT . This IPT has consistently been well prepared to conduct meetings and therefore the business of the program.</p> <p>The contractor appears to be doing its best to deal with the technical and budget constraints in the space segment to maintain schedule.</p>
<b>Summary ID:</b>	322

**Last Author:** hbloom  
**Last Update:** 2003-Jul-18 07:56  
**IPT:** Space Segment  
**Criteria:** Summary/Conclusion  
**Inclination:** Strength  
**Title:** Space Segment "take away " technical Strength  
**Summary:** Technical  
 Technical performance is on track.  
 Development of the CriS with regard to model development and EDU test appear very much on the right course.  
 Development of the CrIS SSM has been highly successful. ITT has successfully demonstrated their initial design capability very quickly.  
 Spacecraft team members innovative and have demonstrated a willingness to take responsibility for the success of the program.

**Summary ID:** 323  
**Last Author:** hbloom  
**Last Update:** 2003-Jul-15 14:48  
**IPT:** Space Segment  
**Criteria:** Summary/Conclusion  
**Inclination:** Weakness  
**Title:** Space Segment "take away" technical Weakness  
**Summary:** There still continues to be a apparent lack of rigor and review with regard to interfaces and estimates of impacts for specification updates ( e.g. calling items class-2 when they need to be class-1 and visa versa). CMIS issue may be causing program impact.

**Summary ID:** 324  
**Last Author:** hbloom  
**Last Update:** 2003-Jul-15 14:49  
**IPT:** Space Segment  
**Criteria:** Summary/Conclusion  
**Inclination:** Weakness  
**Title:** Space Segment "take away" cost Weakness  
**Summary:** Not all sensors are using EVMS and schedules effectively.  
 Raytheon SBRS rarely uses schedules in



their TIMs and QPMRs. When schedules are shown, they do NOT reflect the current baseline with appropriate schedule impacts. Generally, the schedule is "new" to the government. Raytheon SBRS has also failed to use the schedule with a tie to EVMS progress as well

Corrective action: Use the ITT wall walk process.  
Some sensor Format 5's seem to be just pass through's from sensor to NGST.

**Summary ID:** 320

**Last Author:** hbloom

**Last Update:** 2003-Jul-18 07:59

**IPT:** Space Segment

**Criteria:** Summary/Conclusion

**Inclination:** Weakness

**Title:** Space Segment "take away" Management Weakness

**Summary:** Management process and Inter and Intra IPT communication is still confusing and appears to need improvement and be better organized. SE and P/L hand pointing and "that's not in my budget" still continues.

The overall Sys. Eng. process does not appear to be adhered too. (e.g. Cris SVI power, OMPS contamination- \*new).

There still is a perceived weakness with regard to sensor to S/C ICD development for NPP. There is a lot of "sound and fury", but still haven't seen any results or responses. Many upcoming ICD meetings may remedy this. This work must be accomplished.

## Systems Engineering and Integration

**Summary ID:** 203

**Last Author:** jamess

**Last Update:** 2003-Jul-15 13:52

**IPT:** Systems Engineering and Integration

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

**Title:** NGST working very well with Users and NPP

**Summary:** During the NPOESS Customer Forum telecon in May, NGST briefed the Users on the transition to eRooms and explained

how this transition will be accomplished.

The SI group has been very active and cooperative in developing a comprehensive Giver/Receiver list specific to NPP; some work is still needed to integrate the G/R items into the working schedules and plans.

I would rank this as Fully Sat.

**Support:** 428/Management/Management:  
Management  
Tools\ndedwards/2003-May-09 08:37(S:A)

440/Systems Integration/Management:  
NPP Program  
Support\ndedwards/2003-May-19  
10:55(S:A)

487/NPP Management/Management:  
Shared Ownership\nawebb/2003-May-27  
15:25(S:U)

**Summary ID:** 202

**Last Author:** jamess

**Last Update:** 2003-Jul-15 14:35

**IPT:** Systems Engineering and Integration

**Criteria:** Management/Risk Management

**Inclination:** Strength

**Title:** Risk Management Board now an effective management organization

**Summary:** In the last Award Fee period, RMB was almost non-existent. In this period, three RMB meetings were held. The New Risk Management tool is being used and refined (e.g.; more details on risk work have been directed to be added). The tool's 'Opportunity' feature is also being exploited. A misunderstanding of the system level Risk Plan approval process was uncovered; action was taken to correct situation. Overall rating is Very Satisfactory.

**Support:** 485/Systems Engineering and  
Integration/Management: Risk  
Management\njamess/2003-May-27  
13:59(S:A)

541/Systems Integration/Management:  
Risk Management\ndedwards/2003-Jun-25  
09:54(S:A)

**Summary ID:** 325

**Last Author:** jamess

**Last Update:** 2003-Jul-17 12:53

**IPT:** Systems Engineering and Integration  
**Criteria:** Management/Intra and Inter IPT Communication  
**Inclination:** Strength  
**Title:** SMD Data Storage and Playback Trade indicates good collaboration  
**Summary:** The Trade done on SMD Data Storage and Playback, independent from its unflawed conclusions, shows an extremely tight collaboration among sensor, spacecraft, and C3S folks. The Problem statement and option trade space was well defined. Rigorous pro's and con's were developed across a waterfall of functions.  
Possibly the best executed trade package conducted to date.  
**Support:** 624/System Engineering/Management: Intra and Inter IPT Communication\nMWenkel/2003-Jul-14 13:20(S:A)  
**Summary ID:** 326  
**Last Author:** jamess  
**Last Update:** 2003-Jul-15 15:17  
**IPT:** Systems Engineering and Integration  
**Criteria:** Management/Change Management Process  
**Inclination:** Weakness  
**Title:** Poor implementation of approved change  
**Summary:** NGST Configuration Management reviewers need to be more diligent in ensuring that a document has all of its errors corrected prior to its release. The NGST System Specification, Revision F, dated 10 June 2003, was supposedly ready for release. When the approved changes were inserted into the document, numerous (over 3 dozen) errors were inserted. This may be indicative of an inadequate CM tool, a misuse of a CM tool, inadequate document quality control, or other reason.  
**Support:** 625/System Engineering/Management: Change Management Process\nsgoldhammer/2003-Jul-15 08:55(W:A)  
**Summary ID:** 260  
**Last Author:** jamess  
**Last Update:** 2003-Jul-15 14:44  
**IPT:** Systems Engineering and Integration  
**Criteria:** Technical/Requirements Derivation

**Inclination:** Strength

**Title:** Requirements Derivation on track

**Summary:** Developing requirements for Precision Orbit Determination (POD), scheduled for next year, was readily moved forward when concern arose that it might impact spacecraft hardware. Without the quick contractor response, many hidden problems might not have been discovered until it was too late.

There is still a need to do detailed requirements analyses for anomalous situations (failures, outages, non-nominal situations, missed passes, link drop-outs, loss of mandatory ancillary data, etc.). As the design becomes more mature and less flexible, the risk will increase if we wait much longer to work on this.

**Support:** 437/Systems Engineering and Integration/Technical: Requirements Derivation\nmlee/2003-May-12 15:11(S:A)

566/IDPS/Technical: Requirements Derivation\nagoldber/2003-Jul-06 17:27(W:A)

**Summary ID:** 265

**Last Author:** jamess

**Last Update:** 2003-Jul-15 14:46

**IPT:** Systems Engineering and Integration

**Criteria:** Technical/Specifications

**Inclination:** Strength

**Title:** Good update to Appendix C of System Specification

**Summary:** ECR-018 was thoroughly reviewed and vetted with all interested parties to ensure that it reflects the parameters that have been agreed to in the process of creating the NTIA Stage 3 filing material, the communication subsystem designs, and the overall performance of the communications system. This update to the system specification provides the final RF and communications parameters that can then flow, in a timely manner, to the sub-system specifications and the ICD.

**Support:** 410/System Engineering/Technical: Specifications\ncwolejsza/2003-Apr-25 14:12(S:A)

**Summary ID:** 271

**Last Author:** jamess

**Last Update:** 2003-Jul-17 13:05

<b>IPT:</b>	Systems Engineering and Integration
<b>Criteria:</b>	Technical/Trade Studies and Analysis
<b>Inclination:</b>	Strength
<b>Title:</b>	Good Trades on MIB, 1394, GPS, and VCDU
<b>Summary:</b>	<p>Raytheon's handling of the MIB problem has been outstanding. Raytheon applied the necessary resources to explore alternative redesign solutions and then selected the redesign solution that minimized the cost and schedule impacts to the program at an acceptable level of technical risk.</p> <p>The NGST evaluation of the 1355 vs 1394 data bus option was thorough in its consideration of potential impacts to cost, schedule and performance.</p> <p>Good forethought being applied across disciplines on the use of the GPS constellation services such as: spacecraft position, spacecraft timing, POD support, and Occultation measurements. [This could, however, benefit from more System Engineering effort and attention by other IPTs, especially with the long lead time to secure space qualified GPS receivers supporting all NPOESS mission areas.]</p> <p>Raytheon C3S team conducted a small architecture trade on how to handle NPP data ambiguity without a VCDU insert zone to handle VIIRS VCDU rollover. They decided to implement a solution within DRR that will have significant cost and schedule savings over a Space Segment solution.</p>
<b>Support:</b>	<p>446/Payload/Technical: Trade Studies and Analysis\nhswenson/2003-May-21 11:09(S:U)</p> <p>465/Space Segment/Technical: Trade Studies and Analysis\nndemidovich/2003-May-22 11:15(S:U)</p> <p>491/C3/Technical: OPSCONs and Architectures\nMWenkel/2003-May-27 16:39(S:A)</p> <p>526/Spacecraft/Technical: Trade Studies and Analysis\nvchambers/2003-Jun-12 16:57(S:A)</p>
<b>Summary ID:</b>	294
<b>Last Author:</b>	james
<b>Last Update:</b>	2003-Jul-17 08:44
<b>IPT:</b>	Systems Engineering and Integration
<b>Criteria:</b>	Technical/Hardware, Software, and

## Algorithm Design

<b>Inclination:</b>	Strength
<b>Title:</b>	Algorithm development has good process
<b>Summary:</b>	<p>Algorithm Drop 1 was successful. At the end of Period 1, the first drop of science code delivery to IDPS happened on schedule. NGST held a pre-meeting the previous week to make sure all issues were accommodated, resulting in a smooth running Algorithm CCB.</p> <p>The SE IPT has updated and refined the EDR Interdependency Report (Version 1.1 dated 10 July 2003). Emphasis was placed on NPP related EDRs, but attention was also given to the overall system. The EDRIR is an excellent tool for finding information on what a sensor produces and how it does it, what each EDR entails, what is needed to get from a RDR to an EDR, and Intermediate Products. The document also lists ancillary data required for the EDRs as well as back up data where required. These are essential for IDPS design and operation. The report has a good index.</p>
<b>Support:</b>	<p>484/System Engineering/Technical: Hardware, Software, and Algorithm Design\njames/2003-May-27 08:18(S:A)</p> <p>589/System Engineering/Technical: Hardware, Software, and Algorithm Design\nmhaas/2003-Jul-10 11:26(S:A)</p>
<b>Summary ID:</b>	263
<b>Last Author:</b>	james
<b>Last Update:</b>	2003-Jul-15 14:42
<b>IPT:</b>	Systems Engineering and Integration
<b>Criteria:</b>	Technical/Performance
<b>Inclination:</b>	Weakness
<b>Title:</b>	NGST is not following Algorithm CCB process
<b>Summary:</b>	<p>The ACCB allowed the Vegetative Index EDR (and others) to pass with minimal additional testing, data sets, testing conditions, and stratification as required by their wicket 2 criteria. The eliminated testing would include more exhaustive test data sets across a more comprehensive parameter space, and a suite of test data that covers all geophysical conditions. This additional independent verification would ensure that all requirements for the SDR and EDR products are met under realistic and comprehensive test conditions. Decisions are likely driven by schedule rather than performance.</p>

**Support:** 530/System Engineering/Technical: Performance\nnchauhan/2003-Jun-17 09:06(W:A)

**Summary ID:** 258

**Last Author:** jamess

**Last Update:** 2003-Jul-15 14:17

**IPT:** Systems Engineering and Integration

**Criteria:** Technical/OPSCONs and Architectures

**Inclination:** Weakness

**Title:** OPSCON effort may not be enough for delta CDR

**Summary:** The effort that IDPS personnel are going through to produce an excellent conops is impressive. They have detailed discussions of the processing flow within the segment and respond to comments and update the opscon document on a regular basis.

However, the significant resources added during this period are likely too late to recover the OPSCON in time to properly support delta CDR for NPP. The baseline system opscons are lacking the necessary control flow to indicate what would happen under anomalous conditions. Although adequate for understanding interfaces, they are inadequate for the detailed development of the interface specifications that could handle error conditions. By the delta NPP CDR, they will not be adequate for the ground segment, which may cause requirements instability and increased cost and schedule pressure on C3 and IDPS during NPP Ground System development.

**Support:** 433/C3/Technical: OPSCONs and Architectures\ncwolejsza/2003-May-09 14:26(S:A)

491/C3/Technical: OPSCONs and Architectures\nMWenkel/2003-May-27 16:39(S:A)

518/Systems Engineering and Integration/Technical: OPSCONs and Architectures\nnbaker/2003-Jun-05 15:59(S:A)

519/Systems Engineering and Integration/Technical: OPSCONs and Architectures\nnbaker/2003-Jun-05 16:18(W:A)

520/IDPS/Technical: OPSCONs and Architectures\nnbaker/2003-Jun-05 16:21(S:A)

**Summary ID:** 205

**Last Author:** jamess

**Last Update:** 2003-Jul-17 08:33

**IPT:** Systems Engineering and Integration

**Criteria:** Technical/Interface Control Documents

**Inclination:** Weakness

**Title:** ICD development fully coordinated but is a concern for Delta CDR

**Summary:** In general, the technical aspects of ICD work is proceeding well. Good work on the existing content, with User insight into process, and specifically with NSOF details.

However, the maturity level of the ICDs will be inadequate for the delta CDR for NPP in October. Although they are attempting to recover, there is insufficient time left and we anticipate numerous liens against the review.

**Support:** 407/C3/Technical: Interface Control Documents\ncwolejsza/2003-Apr-25 13:59(S:A)

408/C3/Technical: Interface Control Documents\ncwolejsza/2003-Apr-25 14:02(S:U)

434/C3/Technical: Interface Control Documents\ncwolejsza/2003-May-09 14:27(S:U)

436/Systems Engineering and Integration/Technical: Interface Control Documents\ndaveneurauter/2003-May-09 20:32(S:A)

439/Systems Integration/Management: NPP Program Support\ndedwards/2003-May-19 10:52(W:A)

478/System Engineering/Technical: Hardware, Software, and Algorithm Design\ndaveneurauter/2003-May-22 15:56(S:A)

479/System Engineering/Technical: Requirements Derivation\ndaveneurauter/2003-May-22 16:19(S:A)

511/Ground Segment/Technical: Hardware, Software, and Algorithm Design\njmvalenti/2003-May-30 13:00(S:A)

535/System Engineering/Technical: Interface Control Documents\nJaniceKSmith/2003-Jun-18 16:40(W:A)

543/C3/Technical: Interface Control Documents\njmvalenti/2003-Jun-25



13:55(S:A)

**Summary ID:** 327

**Last Author:** jamess

**Last Update:** 2003-Jul-16 09:32

**IPT:** Systems Engineering and Integration

**Criteria:** Cost/Performance Measurement Baseline

**Inclination:** Strength

**Title:** Performance measurement baseline maintained weekly

**Summary:** Despite the complications of maintaining two sets of data, one for the IBR baseline and one for the re-plan, this IPT has been very active in maintaining performance measurement baseline on a weekly basis during this period. This IPT's finances are managed in near real time.

**Support:** 626/System Engineering/Cost: Performance Measurement Baseline\nmstokes/2003-Jul-15 12:59(S:A)

627/Systems Integration/Cost: Performance Measurement Baseline\nmstokes/2003-Jul-15 13:00(S:A)

**Summary ID:** 330

**Last Author:** jamess

**Last Update:** 2003-Jul-17 13:13

**IPT:** Systems Engineering and Integration

**Criteria:** Cost/Program Changes

**Inclination:** Strength

**Title:** Good support of Replan

**Summary:** During the replan, Raytheon was very responsive in providing all of the pertinent subcontract documentation in a timely manner. This enabled a through and timely Govt evaluation of the effort. NGST made a special trip to go over their replan proposal. This was a usefull session and identified several areas that required further research. They also supported 2 days of in depth fact finding and were very forth-coming in thier discussions.

However, the OPSCON basis of estimate (BOE) as written does not adequately explain how the replan estimate was arrived at. Although follow-up explanations have satisfied the IPO, this "refined" estimating methodology will not make it into the proposal due to lead time restrictions on submittal of proposal documentation.

**Support:** 633/Systems Integration/Cost: Program Changes\nmstokes/2003-Jul-15 15:48(?:A)

634/System Engineering/Cost: Program Changes\nmstokes/2003-Jul-15 16:19(S:A)

**Summary ID:** 333

**Last Author:** jamess

**Last Update:** 2003-Jul-16 09:27

**IPT:** Systems Engineering and Integration

**Criteria:** Cost/IPT Financial Management

**Inclination:** Weakness

**Title:** Change instead of fix

**Summary:** Some SI IPT CAMs, faced with 50% cost variance under-runs, are planning on changing the plan and basis instead of researching why the original is not being met. The underruns are below the CPR reporting level so they have not required a variance analysis submission.

**Support:** 630/Systems Integration/Cost: IPT Financial Management\nmstokes/2003-Jul-15 13:28(W:A)

**Summary ID:** 329

**Last Author:** jamess

**Last Update:** 2003-Jul-17 13:11

**IPT:** Systems Engineering and Integration

**Criteria:** Summary/Conclusion

**Inclination:** Strength

**Title:** Recognition of Personnel

**Summary:** The SE&I IPT would like to acknowledge the work of:

Jeff Tu -- for his work on the many Trades and Studies.

Ta-Yung Chu -- for the very useful EDR Interdependency Report.

Carol Low -- for consistent, detailed, and open Financial Management.

Sandra Ketchledge -- for excellent work on the Opscon.

## Systems Test and Evaluation

**Summary ID:** 299

**Last Author:** Benjie

**Last Update:** 2003-Jul-16 00:20  
**IPT:** Systems Test and Evaluation  
**Criteria:** Management/Shared Ownership  
**Inclination:** Strength  
**Title:** SSPR Concept Fully Embraced in STE Replan Effort  
**Summary:** NGST, Raytheon, and the Government STE personnel worked together to fully understand the Replan changes and the STE portion is ready to support NGST proposal submittal.  
**Support:** 532/Systems Test and Evaluation/Management: Shared Ownership\nBenjie/2003-Jun-17 15:50(S:A)  
**Summary ID:** 300  
**Last Author:** Benjie  
**Last Update:** 2003-Jul-14 23:33  
**IPT:** Systems Test and Evaluation  
**Criteria:** Management/Meeting Preparation  
**Inclination:** Strength  
**Title:** Well Prepared for ALL Meetings  
**Summary:** NGST and Raytheon have been well prepared for all IPT, face-to-face, and cross IPT meetings, as well as presentations to the OATs community for Cal/Val.  

In May, Sandra Ketchledge of Raytheon did an exceptional job in briefing AFOTEC and the IPO on OPSCON scenario development for a better understanding of its relationship with OT&E. After the successful presentation, Raytheon team members were able to question AFOTEC on logistics and interoperability. This led to discussions with Sid Skornia (GS O&S IPT) on two AFOTEC Giver/Receiver items that AFOTEC was not aware of.

**Support:** 509/Systems Test and Evaluation/Management: Intra and Inter IPT Communication\nsmink/2003-May-30 09:31(S:A)  
622/Systems Test and Evaluation/Management: Meeting Preparation\nBenjie/2003-Jul-14 02:53(S:A)  
**Summary ID:** 298  
**Last Author:** Benjie

**Last Update:** 2003-Jul-14 23:28  
**IPT:** Systems Test and Evaluation  
**Criteria:** Management/Intra and Inter IPT Communication  
**Inclination:** Strength  
**Title:** Raytheon Invites Team Members for OT&E/OPSCON Clarification  
**Summary:** With AFOTEC participating in test meetings, understanding the influence of the OPSCON could not be done by telephone and Raytheon extended an invitation to have a face-to-face with AFOTEC and IPO to define and clarify OPSCON influence on OT&E.  
**Support:** 509/Systems Test and Evaluation/Management: Intra and Inter IPT Communication\nsmink/2003-May-30 09:31(S:A)  
**Summary ID:** 301  
**Last Author:** Benjie  
**Last Update:** 2003-Jul-16 00:29  
**IPT:** Systems Test and Evaluation  
**Criteria:** Management/NPP Program Support  
**Inclination:** Strength  
**Title:** Exceptional Working Relationship with NPP on Ground Segment Integration Schedule  
**Summary:** Jerry Huller (Raytheon) worked with NPP on a weekly basis, at minimum, to coordinate the Giver-Receiver list, with dates being reflected in the NPP schedule at the NPP CDR. Additionally, the STE IPT supported NPP CDR.  
**Support:** 621/Systems Test and Evaluation/Management: NPP Program Support\nBenjie/2003-Jul-14 02:48(S:A)  
**Summary ID:** 302  
**Last Author:** Benjie  
**Last Update:** 2003-Jul-16 00:47  
**IPT:** Systems Test and Evaluation  
**Criteria:** Technical/Test, Verification, and Cal/Val  
**Inclination:** Strength  
**Title:** Proactive Approach to Cal/Val at System Level and with External Community  
**Summary:** The development of the Cal/Val Plans is

on schedule for the initial Nov 2003 release. The OAT's community has been briefed on the status of the development of the Cal/Val Manuals and the OAT's comments are being addressed.

NGST very proactive in scheduling visits to the four major centrals to discuss NPOESS Cal/Val status, sensor/algorithm development/testing, Cal/Val planning and Cal/Val infrastructure build-up.

**Support:** 513/Systems Test and Evaluation/Technical: Test, Verification, and Cal/Val\nbsjoberg/2003-May-30 13:29(S:A)

623/Systems Test and Evaluation/Technical: Test, Verification, and Cal/Val\nBenjie/2003-Jul-14 03:02(S:A)

**Summary ID:** 328

**Last Author:** Benjie

**Last Update:** 2003-Jul-16 01:05

**IPT:** Systems Test and Evaluation

**Criteria:** Cost/Performance Measurement Baseline

**Inclination:** Strength

**Title:** Actively Maintaining Performance Measurement Baseline

**Summary:** The STE IPT very actively maintains the performance measurement baseline on a weekly basis. The business operations support maintains a very detailed set of spreadsheets that track the financial performance of each cost account and compare actuals to predicted values. This task has been complicated during this period because the IPT must maintain two sets of data, one for the IBR baseline and one for the re-plan.

**Support:** 628/Systems Test and Evaluation/Cost: Performance Measurement Baseline\nnmstokes/2003-Jul-15 13:01(S:A)

**Summary ID:** 338

**Last Author:** Benjie

**Last Update:** 2003-Jul-18 00:30

**IPT:** Systems Test and Evaluation

**Criteria:** Cost/EVMS Data

**Inclination:** Strength

**Title:** IBR Watch List Issues Will Produce More Reliable EV Data

**Summary:** During the IBR process, the IPO identified several "watch list" items that could potentially lead to problems but were not at a level of concern to warrant action items. It would have been very easy for NGST and Raytheon to allow these items to "fall off the radar" as other concerns such as the replan became the focus of the ST&E management team. To their credit, the NGST and Raytheon IPT leadership actively solicited feedback from the IPO on these issues and attempted to incorporate recommendations into the new "rolling wave" of detailed IMS and EVM planning. The impact of this effort will be a more reliable EV data and an easier to follow audit trail for any variances analyses that may be required as the program progresses.

**Support:** 638/Systems Test and Evaluation/Cost: EVMS Data\nmstokes/2003-Jul-16 10:20(S:A)

**Summary ID:** 337

**Last Author:** Benjie

**Last Update:** 2003-Jul-18 00:04

**IPT:** Systems Test and Evaluation

**Criteria:** Cost/Program Changes

**Inclination:** Strength

**Title:** Through Analysis Identifies Elimination of 2000 Manhours

**Summary:** NGST and Raytheon have been proactive in soliciting and incorporating IPO feedback into their portion of the replan proposal. The Raytheon test lead (Jerry Huller) conducted an intensive analysis, explaining how test personnel allocated between ST&E and the O&S IPT led to an identification of 2000 manhours for elimination from the replan. This also allowed the IPO to conduct its own analysis from a common understanding of the current baseline and what is required for the replan.

**Support:** 637/Systems Test and Evaluation/Cost: Program Changes\nmstokes/2003-Jul-16 10:11(S:A)

**Referenced Raw Comments Record ID** 336

**Submitted:** 175/2003-Apr-01 07:11

**IPT:** IDPS

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

**Original Comment:**

Very good work in preparing for and supporting the Field Terminal Users Forum. Positive feedback received from customer attendees

**Review - Accept: - jmulligan - line 321 2003-Apr-08 11:54**

Comments entered under wrong IPT. It also is placed against the new critieria. Not sure how to change that

**Record ID** 403

**Submitted:** 397/2003-Apr-25 10:39

**IPT:** C3

**Criteria:** Cost/IPT Financial Management

**Inclination:** Strength

**Original Comment:**

Raytheon has been very responsive to my various calls and requests. In particular, Rich Dreiling of Raytheon's Business Operations team has been very forthcoming with C3 specific information allowing those of us at the IPO to have a better understanding of the Raytheon position on variances and mitigation steps.

**Review: - vhubenko 2003-Jul-10 21:03**

Charles, combine this one with your other similar comment. This is the type of specifics I need to see. Good Job!

**Clarification:**

cwheeler

No response to clarification request on record

The review process for this comment is not complete

**Record ID** 404

**Submitted:** 397/2003-Apr-25 10:40

**IPT:** GO&S

**Criteria:** Cost/IPT Financial Management

**Inclination:** Strength

**Original Comment:**

The interactions with our NGST and Raytheon O&S counterparts have been both pleasant and helpful. The meetings have gone well and requests for meeting specific information have been met quickly. In particular, Barbara Weaver of Raytheon's Business Operations team has been a great asset to the IPO by supplying information directly related to Ground O&S as well as information to the Air Force Cost Analysis Agency for the Independent Cost Estimate.

**Review - Accept: - mlee - line 321 2003-May-12 14:25**

**Record ID** 407  
**Submitted:** 445/2003-Apr-25 13:59  
**IPT:** C3  
**Criteria:** Technical/Interface Control Documents  
**Inclination:** Strength

**Original Comment:**

Title:  
NPP SS to C3S ICD

Comment:  
Update of NPP Space Segment to C3S ICD has been provided by the contractor.

Action Taken:  
Document review has been completed and comments provided to the author..

Impact (Strength):  
This document necessary for continued development of space segment transmitter design and receiver vendor evaluations. Timely release keeps program on schedule.

**Review - Accept: - vhubenko - line 321 2003-Jul-10 22:15**

**Record ID** 408  
**Submitted:** 445/2003-Apr-25 14:02  
**IPT:** C3  
**Criteria:** Technical/Interface Control Documents  
**Inclination:** Strength

**Original Comment:**

Title:  
C3S Interface Control Document (ICD) with Svalbard

Comment:  
Original release of C3S Interface Control Document (ICD) with Svalbard has been provided by the contractor.

Action Taken:  
Document review has been completed and comments provided to the author..

Impact (Strength):  
This document necessary for continued development of space segment transmitter design and receiver vendor evaluations. Timely release keeps program on schedule.

**Review: - vhubenko 2003-Jul-10 22:16**

How complete was the document? Were the comments



rolled in? How does it look for integrating C3 into Svalbard?

**Clarification:**

cwolejsza

2003-Jul-18 10:46

Here is the latest on the Svalbard ICD. The original draft was provided to KSAT early in the year, but was put on hold, pending option 4D. Raytheon got authority to proceed, at risk, in June. They have the action to provide the update to KSAT for review. The demarc points will include both the backend equipment, and the RF Antenna, especially status and control. Current initial release covered by ECR-C3S-R112.

The review process for this comment is not complete

**Record ID** 410

**Submitted:** 445/2003-Apr-25 14:12

**IPT:** System Engineering

**Criteria:** Technical/Specifications

**Inclination:** Strength

**Original Comment:**

Title:

Update to Appendix C of System Specification

Comment:

ECR-018 has been thoroughly reviewed and vetted with all interested parties and now reflects the parameters that have been agreed to in the process of creating the NTIA Stage 3 filing material, the comm. Subsystem designs, and the overall performance of the communications system.

Action Taken:

ECR-018 is expected to be CCB'd on April 25, 2003.

Impact (Strength):

This update to the system specification will provide the final RF and communications parameters that can then flow, in a timely manner, to the sub-system specifications and the ICD that are in progress, or yet to come.

**Review - Accept: - jamess - line 321 2003-May-27 08:24**

**Record ID** 415

**Submitted:** 369/2003-May-08 11:19

**IPT:** Spacecraft

**Criteria:** Technical/Requirements Derivation

**Inclination:** Strength

**Original Comment:**

IPO expressed concerns on the completeness of derived requirements resulting from Autonomy and Fault Management. The NGST Autonomy/FM lead Ellen Ryan quickly took advantage of IPO travel to NGST for the Replan Kickoff and set up an excellent and informative splinter with IPO FO IPT members, NGST FO IPT members, and the ACS lead for NGST.

Action: Ellen Ryan set up impromptu meeting with great efficiency and utility. Then, worked with the IPO to begin a joint IPO/NGST/Raytheon working group on Autonomy/FM.

Impact: IPO concerns allayed. Better communication across IPTs now in place due to contractor/IPO actions.

**Review - Accept: - vchambers - line 321 2003-Jun-12 16:49**

**Record ID** 416

**Submitted:** 369/2003-May-08 11:27

**IPT:** Spacecraft

**Criteria:** Technical/Requirements Derivation

**Inclination:** Strength

**Original Comment:**

Item: IPO expressed a concern that Precision Orbit Determination (POD) requirements might impact flight hardware specifications. Robert Kendzlic moved the POD scenario process forward in time. Then, realizing the scope of the subject, set up a POD forum in Lanham, MD. Science team members, S/W developers, IPO payload and s/c team members, O&S IPT team members, the NGST ACS Lead Peter Quast, and others attended the whole day conference.

Action: Peter Quast explained the options available for GPS receivers, discussed the GD GPS receiver specifically, and generally provided expertise which resulted in a better understanding of the problems and options for the altimetry mission.

Impact: Many important actions were taken as a result of the information exchange. The minutes written by Robert Kendzlic were excellent. The NPOESS program's ability to support the altimetry mission was enhanced greatly.

**Review - Accept: - vchambers - line 321 2003-Jun-12 16:50**

**Record ID** 420

**Submitted:** 495/2003-May-08 15:36

**IPT:** C3

**Criteria:** Cost/Cost Control

**Inclination:** Strength

**Original Comment:**

Elements in the C3S IPT are seeking to minimize cabling costs at NSOF. They are working aggressively to provide the NSOF Project team inputs for inclusion in the facilities cable plant. Both the DRR element and the MMC elements have been proactive in this endeavor.

**Review - Accept: - vhubenko - line 321 2003-Jul-10 20:55**

DRR and MMC elements have been proactive in a quest to minimize cabling costs at NSOF, saving the Segment (and Gov't) cost.

**Record ID** 421

**Submitted:** 495/2003-May-08 15:39

**IPT:** C3

**Criteria:** Cost/Cost Control

**Inclination:** Strength

**Original Comment:**

The DRR and MMC elements of the C3S IPT are working to control costs for long-term O&S by exploiting as much of the facility infrastructure as possible at NSOF. Areas under investigation include the internet service for the Mission Support Data Server as well as the use of existing telephony switching equipment already on-site for NPOESS operations.

**Review - Accept: - vhubenko - line 321 2003-Jul-10 21:00**

DRR and MMC elements are proactively working to control long-term O&S costs for long-term O&S by exploiting as much of the facility infrastructure as possible at NSOF, such as use of existing telephony switching equipment and cabling infrastructure.

**Record ID** 422

**Submitted:** 381/2003-May-08 16:07

**IPT:** NPP Management

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

**Original Comment:**

PW told me about problems NGST is having with stovepiping. They are having special management meetings to address these concerns - moving people around to address these problems among IPTs

Continue to track this problem - how it effects NPP coordination

**Review - Accept: - awebb - line 321 2003-May-23 13:27**

**Record ID** 423**Submitted:** 381/2003-May-08 16:15**IPT:** NPP Management**Criteria:** Management/Shared Ownership**Inclination:** Strength**Original Comment:**

NPP ICDs are still not working  
M Cummings told me that there are two separate teams working ICDs with Ball, one for NPP and one for NPOESS. Also, there is a lot of confusion about how this should be done, e.g., the 8/6 GIID is still valid for NPP (apparently) but they are writing 5 separate ICDs for NPOESS replacing the GIID. This is disappointing to MC because it negates and duplicates a lot of the work he has done.

Watch the progress of this it has been a problem all along and is fraught with possibilities for future screw-ups.

**Review - Accept: - awebb - line 321 2003-May-23 13:27****Record ID** 424**Submitted:** 381/2003-May-08 16:20**IPT:** NPP Management**Criteria:** Management/Shared Ownership**Inclination:** Strength**Original Comment:**

ATMS - T. O'Brien yesterday 5/7/03 met with NGST (Ricker) and NGST experts to get help with the BAE MMIC problem. This is good because it is an example of NG trying to work together as a team. However, they are treading thin ice because NGST is the competition for BAE in MMICs. Therefore, about the best they could do was agree to put together a team of experts from the outside to try to help BAE.

**This comment has not been reviewed****Record ID** 425**Submitted:** 381/2003-May-08 16:24**IPT:** NPP Management**Criteria:** Management/Shared Ownership**Inclination:** Strength**Original Comment:**

ATMS proposal effort for NPOESS. NG - Rolling Meadows a non-bidder for the NPOESS contract for the IF amplifiers. This probably means that a lot of the development funds is down the drain. However, they are all NG. Can NG management at some level step in and work this out to the

benefit of everybody. Seems NG award fee should involve how well they are able to manage NG as a whole company. After all, they only have one bottom line. Watch progress on this.

**This comment has not been reviewed****Record ID** 428**Submitted:** 374/2003-May-09 08:37**IPT:** Management**Criteria:** Management/Management Tools**Inclination:** Strength**Original Comment:**

NGST is transitioning from JEDI to eRooms. During the NPOESS Customer Forum telecon for May, NGST briefed the Users on how this transition was to take place. Two items concerning this transition should help make the switchover smooth.

1- NGST has acquired its license for eRoom such that all users of eRoom will automatically be covered.

2- NGST will use the present roster on eRoom to grant access to the fullup version. Present users of JEDI should not have to do anything.

**Review - Accept: - dfurlong - line 321 2003-May-22 15:25****Record ID** 429**Submitted:** 397/2003-May-09 11:09**IPT:** C3**Criteria:** Cost/IPT Financial Management**Inclination:** Strength**Original Comment:**

Raytheon has been very responsive to my various phone calls and requests. The idea of shared ownership is actually being implemented and is easily visible within the interactions between the IPO and Raytheon. On the cost and schedule side, I have been able to receive most information that I have asked for. If any information could not be shared with me, I received a reasonable explanation as to why that information couldn't be shared at the exact time that I asked for it.

**Review: - vhubenko 2003-Jul-10 21:02**

Please give more specific examples, such as interactions with Wever and Dreiling. Also, don't forget to comment about Tracy Patterson's performance.

**Clarification:**

cwheeler

2003-Jul-14 12:14

Specifically, Rich Dreiling and Barbara Weaver have been a pleasure to work with. They haven't answered all business management questions posed by myself and others within C3 quickly and completely.

The review process for this comment is not complete

**Record ID** 433

**Submitted:** 445/2003-May-09 14:26

**IPT:** C3

**Criteria:** Technical/OPSCONs and Architectures

**Inclination:** Strength

**Original Comment:**

Title:  
OPSCON Discussion at C3S PDA

Comment:  
The OPSCON briefing on the second day provided a good overview of Raytheon's approach to defining and evaluating operations concepts, including a very excellent tutorial on how to read and interpret the OPSCON scenario charts. In addition, the briefing walked through the total process, and provided a number of example scenarios to illustrate the kind of results that are obtained.

Action Taken:  
N/A

Impact (Strength):  
This briefing provided a thorough and understandable view of the OPSCON process and scenario formulation that will help the program achieve its mission.

**Review - Accept: - vhubenko - line 321 2003-Jul-11 14:29**

**Record ID** 434

**Submitted:** 445/2003-May-09 14:27

**IPT:** C3

**Criteria:** Technical/Interface Control Documents

**Inclination:** Strength

**Original Comment:**

Title:  
Interface Discussions at C3S PDA

Comment:  
The PDA briefing on interfaces provided a comprehensive outline of the interface development process, the baseline specifications tree, with ICD's and described a number of significant specific ICD documents.

Action Taken:  
N/A

**Impact (Strength):**

This briefing provided a thorough and understandable view of the ICD process and a list of expected ICD's that will be needed by the program to achieve its mission.

**Review: - vhubenko 2003-Jul-10 22:17**

Chet, I think this would fall better into a category that shows the shared ownership under management, giving us insight into their processes and work. Please recategorize. Thanks!  
-Victor

**Clarification:**

cwolejsza

2003-Jul-18 11:01

Sound fine to me. How do I do that without re-writing the whole comment?

The review process for this comment is not complete

**Record ID** 435

**Submitted:** 124/2003-May-09 20:23

**IPT:** ILS

**Criteria:** Technical/Interface Control Documents

**Inclination:** Strength

**Original Comment:**

During April 03, the Facilities Working Group has worked with the Systems Segments to identify all their facilities requirements. They are placing all the NPOESS Segments into the Facility Requirements Documents for each of the applicable facilities, recognizing that the Centrals and C3 facility managers need to see all of the NPOESS requirements in one place. The FWG has also been working to establish a Deployment Manager to be the POC for the deployment of all the NPOESS systems. Mr. Robert Gordon continues to be a strong proponent for this position.

**Review - Accept: - mlee - line 321 2003-May-12 14:25**

**Record ID** 436

**Submitted:** 124/2003-May-09 20:32

**IPT:** Systems Engineering and Integration

**Criteria:** Technical/Interface Control Documents

**Inclination:** Strength

**Original Comment:**

In April 03, the Raytheon Team has provided key

information to the NSOF Facility Working groups, providing critical IDP and C3 requirements to ensure our needs will be met and the facility will be designed to integrate with our systems. This was exemplified in several critical meetings with the Telecomm Working Group in April. These interchanges will maximize our use of the facility's communications infrastructure and maintain the flexibility we need to support our future requirements.

**Review - Accept: - dedwards - line 321 2003-May-19 10:40**

**Record ID** 437

**Submitted:** 369/2003-May-12 15:11

**IPT:** Systems Engineering and Integration

**Criteria:** Technical/Requirements Derivation

**Inclination:** Strength

**Original Comment:**

Item: IPO member requested that Precision Orbit Determination (POD) scenario be moved forward in time as it might impact spacecraft hardware.

Action: Bob Kendzlic readily agreed to move the scenario up, and set up a POD forum at Landover, MD. The forum was well attended and many issues were brought up. Bob Kendzlic provided excellent minutes on the meeting.

Impact: Because of the contractor response, many hidden problems might not have been discovered until it was too late. The POD requirements do have an impact on the spacecraft hardware and configuration, some of which need to be worked ASAP.

**Review - Accept: - jamess - line 321 2003-May-29 15:04**

**Record ID** 438

**Submitted:** 394/2003-May-14 09:43

**IPT:** Management

**Criteria:** Management/Change Management Process

**Inclination:** Strength

**Original Comment:**

NGST has agreed to directly use the IPO on-line Configuration Change Request (CCR) system to submit the technical documentation change portion of Engineering Change Proposals (ECP). This agreement will allow the IPO to avoid re-keying ECP information into the CCR system. Data entry errors will be avoided and turn around time for processing of ECPs by the Government NPOESS Configuration Control Boards will be shortened.

**Review - Accept: - dfurlong - line 321 2003-May-22 15:24**



**Record ID** 439  
**Submitted:** 374/2003-May-19 10:52  
**IPT:** Systems Integration  
**Criteria:** Management/NPP Program Support  
**Inclination:** Weakness

**Original Comment:**

At May 5th Delta CDR telecon, Gary Waldeck, NGST SI lead, stated that the ICDs required for this review will be about 95% complete. That is, the ICDs should be ready to go into signature cycle. Later, Gary found out [and pointed out to the IPO] that the NPP to IDPS ICD may not be at that level due to the fact that the IDPS Drops 1.2 and 1.3 occur after the Delta CDR. These drops will probably affect some of this ICDs contents. Although Gary is working to minimize the effect of this disconnect, it could result in some additional work on the NPP side. Since the other ICDs seem to be on schedule, the overall rating is Satisfactory.

**Review - Accept: - dedwards - line 321 2003-May-19 10:56**

**Record ID** 440  
**Submitted:** 374/2003-May-19 10:55  
**IPT:** Systems Integration  
**Criteria:** Management/NPP Program Support  
**Inclination:** Strength

**Original Comment:**

NGST, under the lead of SI, has made a major effort to coordinate activities with NPP NASA. This has included working out over 800 Giver/Receiver items. Rating is Excellent.

**Review - Accept: - dedwards - line 321 2003-May-19 10:56**

**Record ID** 441  
**Submitted:** 381/2003-May-19 14:51  
**IPT:** NPP Management  
**Criteria:** Management/Shared Ownership  
**Inclination:** Strength

**Original Comment:**

The originator of this Award Fee Input felt that you should be made aware of it's submission. Please understand that this information has not been dispositioned by a Performance Monitor, and it should not be interpreted to represent the position of the AFRB or the FDO.

#### AWARD FEE COMMENT SUBMISSION

Author: David J. Edwards  
Submitted 2003-05-19 14:52  
Period: (2003-04-01 to 2003-09-30)  
Criteria: Management/NPP Program Support  
IPT: Systems Integration  
Inclination: Weakness

At May 5th Delta CDR telecon, Gary Waldeck, NGST SI lead, stated that the ICDs required for this review will be about 95% complete. That is, the ICDs should be ready to go into signature cycle. Later, Gary found out [and pointed out to the IPO] that the NPP to IDPS ICD may not be at that level due to the fact that the IDPS Drops 1.2 and 1.3 occur after the Delta CDR. These drops will probably affect some of this ICDs contents. Although Gary is working to minimize the effect of this disconnect, it could result in some additional work on the NPP side. Since the other ICDs seem to be on schedule, the overall rating is Satisfactory.

**This comment has not been reviewed**

**Record ID** 442  
**Submitted:** 381/2003-May-19 15:10  
**IPT:** NPP Management  
**Criteria:** Management/Shared Ownership  
**Inclination:** Strength

#### Original Comment:

The originator of this Award Fee Input felt that you should be made aware of it's submission. Please understand that this information has not been dispositioned by a Performance Monitor, and it should not be interpreted to represent the position of the AFRB or the FDO.

#### AWARD FEE COMMENT SUBMISSION

Author: David J. Edwards  
Submitted 2003-05-19 14:55  
Period: (2003-04-01 to 2003-09-30)  
Criteria: Management/NPP Program Support  
IPT: Systems Integration  
Inclination: Strength

NGST, under the lead of SI, has made a major effort to coordinate activities with NPP NASA. This has included working out over 800 Giver/Reciever items. Rating is Excellent.

**This comment has not been reviewed**

**Record ID** 444  
**Submitted:** 404/2003-May-21 07:14  
**IPT:** Payload  
**Criteria:** Technical/Hardware, Software, and Algorithm Design  
**Inclination:** Strength

**Original Comment:**

Initial development of the CrIS scan drive system has been highly successful. In completing and demonstrating an initial design, ITT has made good use of materials delivered by Ball Aerospace, and has exceeded expectations by completing the initial design in a highly expeditious manner.

ITT has also made very good use of EDU#2 to evaluate system level performance and identifying a number of significant design deficiencies. Careful systems engineering processes are being used to evaluate cause of the problems and to develop modifications that will reduce or eliminate their effect. The process undertaken underscores the benefits that accrue to extensive use of Engineering Development Units to find problems and evaluate modifications that eliminate them. ITT should be credited with recognizing the value of EDU testing to uncover problems and rectify them before proceeding to flight model production.

**This comment has not been reviewed**

**Record ID** 446  
**Submitted:** 508/2003-May-21 11:09  
**IPT:** Payload  
**Criteria:** Technical/Trade Studies and Analysis  
**Inclination:** Strength

**Original Comment:**

Raytheon's handling of the MIB problem, from its discovery through the DDR on 8 May 03, has been outstanding. Raytheon applied the necessary resources to explore alternative redesign solutions and then selected the redesign solution that minimized the cost and schedule impacts to the program at an acceptable level of technical risk. Throughout this process Raytheon was under intense scrutiny from both the government team and NGST. As a team, from management to engineering, Raytheon accepted the scrutiny, comments, guidance, and action items with an entirely cooperative, appreciative, and highly professional attitude. Raytheon was thoroughly responsive to the guidance it was given regarding the outputs desired at each review during this period. The DDR in particular was an outstanding review in which Raytheon provided sufficient technical analysis to warrant an unofficial consent to proceed with the redesign.

**This comment has not been reviewed**

**Record ID** 447  
**Submitted:** 508/2003-May-21 11:13

**IPT:** Payload

**Criteria:** Cost/Program Changes

**Inclination:** Strength

**Original Comment:**

NGST deserves great credit for its management and guidance of Raytheon activities dedicated to solving the MIB problem.

In scheduling reviews, selecting topics, appropriately filtering and assigning action items, and providing timely management and technical feedback, NGST struck just the right balance between providing sufficient insight to the IPO and NGST while allowing Raytheon sufficient time between reviews to accomplish the demanding technical tasks necessary to resolve the MIB issue. NGST also performed independent optical analyses to support the redesign effort, and the NGST technical team present at reviews provided insightful and constructive technical feedback to Raytheon.

**This comment has not been reviewed**

**Record ID** 449

**Submitted:** 508/2003-May-21 11:21

**IPT:** Payload

**Criteria:** Management/Management Processes

**Inclination:** Weakness

**Original Comment:**

NGST has built an IPT structure that nominally addresses all technical areas and nominally includes the appropriate internal and external interfaces. However, NGST performance to date gives the impression that the IPTs operate with inadequate coordination and communication to constitute an effective apparatus for executing the program. Calibration/validation responsibilities, for example, seem to be dispersed among the NGST Cal/Val IPT, the NGST System Performance IPT, the VIIRS NGST technical team (Payload IPT), and the Raytheon SE IPT. Within NGST, cal/val issues are recognized, understood, appreciated, assigned to an appropriate IPT, and proposed actions are documented, with the caveat that program cost/schedule constraints may preclude or limit implementation. I see little in the way of effective leadership and problem solving from NGST in the cal/val area to date. Technical issues appear to languish without resolution, or a resolution is proposed which by admission will not or cannot be implemented.

**This comment has not been reviewed**

**Record ID** 451

**Submitted:** 508/2003-May-21 11:30

**IPT:** Payload

**Criteria:** Management/Management Processes

**Inclination:** Strength

**Original Comment:**

Another example of failed IPT communication, coordination, and overall effectiveness was the NGST response to the IPO request for EDR impacts of the MIB redesign, presented at the MIB DDR by Ed Hess. NGST purportedly has the technical expertise and apparatus to conduct an end-to-end error propagation analysis, but failed to provide what was requested. The NGST System Performance IPT should have provided the leadership to bring together the resources within NGST needed to provide an adequate technical response, or should have deferred a response until the necessary work could be accomplished. Instead, the results of an analysis based on ad hoc assumptions about changes in sensor performance (e.g., 10% degradation in calibration performance unjustified by any technical rationale) were somehow converted into EDR impacts by a methodology that was either inadequate, or inadequately described.

**This comment has not been reviewed**

**Record ID** 456  
**Submitted:** 461/2003-May-21 23:37  
**IPT:** Space Segment  
**Criteria:** Management/Intra and Inter IPT Communication  
**Inclination:** Weakness

**Original Comment:**

The flowdown of the tasking to evaluate the potential programmatic impacts of the DOD 8500 series to space segment IPT members was incomplete. The estimates for impact to date have no clear factual basis and did not even show an understanding of the 8500 series requirements

**This comment has not been reviewed**

**Record ID** 461  
**Submitted:** 511/2003-May-22 09:27  
**IPT:** Payload  
**Criteria:** Technical/Hardware, Software, and Algorithm Design  
**Inclination:** Strength

**Original Comment:**

ITTs development of the CrIS SSM has been highly successful. ITT has successfully demonstrated their initial design capability very quickly. They have also effectively used parts from the Ball contract to maintain program costs at a low level. ITT's ability to get the SSM this far along in such a short time has demonstrated that NGST/ITT made the right decision when they brought the SSM inhouse.

**This comment has not been reviewed**

**Record ID** 464  
**Submitted:** 508/2003-May-22 11:02

**IPT:** Payload

**Criteria:** Cost/Program Changes

**Inclination:** Weakness

**Original Comment:**

Raytheon SBRS rarely uses schedules in their TIMs and QPMRs. When schedules are shown, they do NOT reflect the current baseline with appropriate schedule impacts. Generally, the schedule is "new" to the government. Raytheon SBRS has also failed to use the schedule with a tie to EVMS progress as well.

**This comment has not been reviewed**

**Record ID** 465

**Submitted:** 461/2003-May-22 11:15

**IPT:** Space Segment

**Criteria:** Technical/Trade Studies and Analysis

**Inclination:** Strength

**Original Comment:**

Evaluation of implementation of 1355 databus option (vs 1394) was thorough in its consideration of potential impacts to cost, schedule and performance -- would rate as "Fully Satisfied" (as subcontractors were not consulted)

**This comment has not been reviewed**

**Record ID** 467

**Submitted:** 461/2003-May-22 12:04

**IPT:** Space Segment

**Criteria:** Technical/Specifications

**Inclination:** Weakness

**Original Comment:**

The EMI/EMC Control Plan was originally taken to the ECR as a "Class 2" ECP. It did not take into account the GFE Payloads (SARSAT and ADCS) which have interfaces under government control and thus should have been a "Class 1". The plan had other technical shortcomings as well.

Corrective Action: NGST plans to update the EMI/EMC Control Plan and coordinate it with the IPO before resubmitting it to the ECR and then the CCB.

**This comment has not been reviewed**

**Record ID** 470

**Submitted:** 245/2003-May-22 14:36

**IPT:** Management

**Criteria:** Cost/Reports

**Inclination:** Weakness

**Original Comment:**

Sensor cost reports from the NGST appear to be a pass through from NGST with little specific explanation of variances. In addition, when discussing the CPR data with SPD the IPO IMs have the NGST assessment then their own assessment of the cost data. The two difficulties here are a lack of detail from either sensor subs or NGST on specific cost variance and the need for the IPO IMs to develop their own assessments of variances. In a SSPR approach, the IPO IMs should be presenting to the SPD with the NGST counterparts on the line.

**Corrective Actions**

- More detailed explanation of variances from the sensor subcontractors with added detail from the NGST managers
- when presenting cost data to SPD the NGST manager should be on the line to assist in explaining variances and support to sensor IMs

**Review - Accept: - dfurlong - line 321 2003-May-22 15:24**

**Record ID** 474

**Submitted:** 245/2003-May-22 15:03

**IPT:** Management

**Criteria:** Management/Meeting Preparation

**Inclination:** Strength

**Original Comment:**

Tom Kolesar's work for the 5% roll over from the 1st award fee period has been excellent. 22 May 2003

- He formulated and action plan
- taken the lead on establishing a schedule
- Has worked closely with the criteria evaluation team - Furlong, Bloom, Bucher, Goodrich, Kolesar, Larson, and Chappel - to write criteria and keep senior NPOESS management informed

**Review - Accept: - dfurlong - line 321 2003-May-22 15:25**

**Record ID** 477

**Submitted:** 245/2003-May-22 15:21

**IPT:** Management

**Criteria:** Management/Responsiveness

**Inclination:** Strength

**Original Comment:**

NGST support to the AF CAIG has been outstanding. The AF CAIG has been a thorn in the IPOs side for the last year

with first tier apathy toward NPOESS, followed by stonewalling, and leading to the explanation of their cost concerns being nothing short of ridiculous. NGST has assisted in addressing the key ICE concerns and allowing the IPO to reduce the cost risk differentials.

**Review - Accept: - dfurlong - line 321 2003-May-22 15:26**

**Record ID** 478  
**Submitted:** 124/2003-May-22 15:56  
**IPT:** System Engineering  
**Criteria:** Technical/Hardware, Software, and Algorithm Design  
**Inclination:** Strength

**Original Comment:**

The NPOESS IDPS, C3S and DRR engineering teams have done an outstanding job in pulling together the NPOESS Equipment Requirements to feed to the Suitland NSOF Working Groups. These requirements are needed now, by the NESDIS NSOF Facility working groups to be sure that the facility that is constructed is robust and meets all the occupants' requirements. There are also a number of subcontracts that must be definitized and executed in the near term to complete the NSOF infrastructure and support systems. The NPOESS teams have found the time, within the already heavy schedule supporting the baseline of the contract and now the replan, to pull together, format, provide, and explain the data required. They have been very patient in responding to the push from the NSOF working groups to get the data, and are in the process of completing the effort to get all the data required and asked for, in the format, with the explanations and details requested. The efforts of Mr. Mark Hyde, Mr. Robert Cummings and Mr. Colin Connor have been instrumental in defining our requirements in the NSOF and building a strong working relationship with the NESDIS Team.

**Review - Accept: - dedwards - line 321 2003-May-23 09:16**

**Record ID** 479  
**Submitted:** 124/2003-May-22 16:19  
**IPT:** System Engineering  
**Criteria:** Technical/Requirements Derivation  
**Inclination:** Strength

**Original Comment:**

The NPOESS Facility Working Group continues to pull together the right people to address critical facilities issues. The FWG has the responsibility to ensure that the facility



requirements are fully defined and provided to the right groups and ensure they are ready to support the program. Mr. Robert Gordon continues his excellent start in getting the FWG established and is making the rounds within the NPOESS IPTs, strongly influencing their efforts, securing the attention of key individuals, and gaining their support in the facilities efforts. He put together an excellent briefing on the efforts of the FWG that is adaptable to the audience. He has begun to take his presentation on the road to the Centrals, the NSOF, and other locations. Robert has achieved immediate support from the NPOESS Team, SSPP and government alike, as well as the customers at the Centrals and the NESDIS NSOF.

**Review - Accept: - jamess - line 321 2003-May-27 08:25**

**Record ID** 482

**Submitted:** 369/2003-May-23 09:37

**IPT:** FO&S

**Criteria:** Management/Meeting Preparation

**Inclination:** Strength

**Original Comment:**

Item: The FO IPT has a concern that the expertise developed by writing the procedures in C3S be kept for operations.

Action: Terry Watson helped explain the concern that there be a transition and continuity of support from development and testing to operations for procedure creation. He clarified the FO IPT position during the C3S IPT on May 1. Additionally he continued the discussions in a splinter group with Dana Smerchek and Mike Lee.

Impact: The C3S understands the need for continuity of personnel into operations. Both IPTs agree that the problem must be addressed. The exact solution will be determined later but several options are known already.

**Review - Accept: - mlee - line 321 2003-Jun-05 12:39**

**Record ID** 483

**Submitted:** 369/2003-May-23 09:38

**IPT:** FO&S

**Criteria:** Management/Meeting Preparation

**Inclination:** Strength

**Original Comment:**

Flight O&S members continue to be active participants in meetings, scenario reviews, and working groups that cut

across all levels of the program. This ensures that FO needs are addressed and concerns are voiced.

**Review - Accept: - mlee - line 321 2003-Jun-05 12:39**

**Record ID** 484

**Submitted:** 359/2003-May-27 08:18

**IPT:** System Engineering

**Criteria:** Technical/Hardware, Software, and Algorithm Design

**Inclination:** Strength

**Original Comment:**

TITLE: Algorithm Drop 1 successful

COMMENT: At the end of Period 1, the first drop of science code delivery to IDPS happened on schedule. NGST held a pre-meeting the previous week to make sure all issues were accommodated. The Algorithm CCB went very smoothly.

IMPACT: STRENGTH

This set the precedent for future Science Code drops. Well done.

**Review - Accept: - jamess - line 321 2003-May-27 08:20**

**Record ID** 485

**Submitted:** 359/2003-May-27 13:59

**IPT:** Systems Engineering and Integration

**Criteria:** Management/Risk Management

**Inclination:** Strength

**Original Comment:**

New Risk Management tool is being used effectively during monthly RMB meetings. Tool adds new category of "Opportunities" which adds focus on improving what is already working, not just waiting to overcome a risk of things going bad.

**Review - Accept: - jamess - line 321 2003-May-29 15:03**

**Record ID** 486

**Submitted:** 534/2003-May-27 14:23

**IPT:** Spacecraft

**Criteria:** Technical/Performance

**Inclination:** Strength

**Original Comment:**

04-01-03 to 05-27-03

Space Craft IPT continues to support System Integration monitoring and development of Space Segment Program Technical Performance Measures (TPM). Mass and Power proposed requirements changes associated with the payload state of maturity are being evaluated and assessed in regard to the baseline spacecraft design.

**Review - Accept: - vchambers - line 321 2003-Jun-12 16:47**

**Record ID** 487

**Submitted:** 381/2003-May-27 15:25

**IPT:** NPP Management

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

**Original Comment:**

input from Janice Smith on 5/23

May Eval Input

The SI group working NPP has been very interactive and cooperative in developing a comprehensive G/R list specific to NPP. The list of sufficient detailed to track exchanges on a lower level basis and is still in the process of being scrubbed for duplicates. The status of the identified items has yet to begin and some items are now past due. Late items include those that were to support the NPP spacecraft CDR. In lieu of those items, assumptions are being made to proceed with the design information necessary for CDR.

**This comment has not been reviewed**

**Record ID** 488

**Submitted:** 451/2003-May-27 16:02

**IPT:** C3

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

**Original Comment:**

David Lubar initiated and co-chairs the Receptor Siting Working Group and conducted its kickoff meeting on 7 May. David ensured the proper folks attended and gave excellent presentations. Most of these were from sub contracts such as AT&T and KDW. The importance of the work of this group cannot be understated in that Safety Net as a viable architecture hinges on in-country spectrum availability and

landing rights. First mile communications cost are also a key consideration. This kickoff was timely and Raytheon has put a good team together with a clear charter and objectives.

**Review - Accept: - vhubenko - line 321 2003-Jul-10 21:25**

The Receptor Siteing working Group kickoff was timely. David Lubar put a good team together, including Gov't members, with a clear charter and objectives.

**Record ID** 489

**Submitted:** 451/2003-May-27 16:10

**IPT:** C3

**Criteria:** Management/Management Processes

**Inclination:** Strength

**Original Comment:**

Raytheon has established a 6-Sigma project to help guide and evaluate the Receptor Siteing Working Group. This is a good and appropriate use of the 6-Sigma process and indicates that Raytheon walks the walk.

**Review - Accept: - vhubenko - line 321 2003-Jul-10 21:06**

**Record ID** 491

**Submitted:** 451/2003-May-27 16:39

**IPT:** C3

**Criteria:** Technical/OPSCONs and Architectures

**Inclination:** Strength

**Original Comment:**

The Raytheon C3S team conducted a small architecture trade on how to handle NPP data ambiguity due to the fact that NPP (Ball) is not implementing a VCDU insert zone to handle VIIRS VCDU rollover. NGST baselined the insert zone in their proposal, and without such a zone, DMR functionality could be compromised on NPP. Raytheon evaluated several solutions and for the right reasons decided to implement a solution within DRR. This is to some extent a generic solution in that other future missions that will have a high VCDU rollover rate could likewise benefit from this design.

**Review - Accept: - vhubenko - line 321 2003-Jul-10 21:28**

Absolutely a Strength. For a relatively small cost, the C3 IPT designed a solution that would have cost the Space Segment at least ten fold in cost and possibly schedule, while coming up with a generic solution that may save future costs for any other possible sensor or spacecraft changes.

**Record ID** 492

**Submitted:** 378/2003-May-27 16:44

**IPT:** Payload

**Criteria:** Technical/Specifications

**Inclination:** Weakness

**Original Comment:**

As of 5/15, there are over 20 ICSRs that are pending with NGST. These clarifications/data requests have been submitted from time to time by Boeing (CMIS sensor vendor) to NGST. Boeing brings these up each time during the weekly telecons with NGST. Some of these ICSRs goes back to November of 2002. Situation has reached to a point where non-reply by NGST has started hurting CMIS schedule.

It should be mentioned here that there is a significant schedule variance in the CMIS program. Although Boeing is blamed for this, but NGST's delayed responses and wrong directions (in some cases) are part of the blame.

**This comment has not been reviewed**

**Record ID** 505

**Submitted:** 445/2003-May-28 11:07

**IPT:** C3

**Criteria:** Technical/OPSCONs and Architectures

**Inclination:** Strength

**Original Comment:**

Raytheon Ground Station Element set up a site visit to the NASA White Sands Complex to identify and discuss issues associated

with using the Space Network for NPOESS support during launch and early orbit, orbit maneuvers or calibration and contingency

(anomaly) situations. The Raytheon team was well prepared and conducted the meeting very effectively. The meeting identified and

resolved many issues associated with documentation, hardware requirements and accommodation, operations and support, and well

as, test and integration. Several action items were generated, which are documented separately. The key item is the definition of the

hardware architecture, which is complicated by the fact that there are two ground stations at the complex, which are separated by

several miles. There is an inter facility link between the sites, but the equipment that would permit the transfer of clock and data

between the sites is obsolete, and no replenishment hardware is available. Three alternate architectures were identified, and

Raytheon will evaluate these options.

**Review: - vhubenko 2003-Jul-10 22:19**

Chet, what option did Raytheon pick of the three they proposed? What is the status of the work that came out of this trip? How complete is their SN interface?

Thanks!  
-Victor

**Clarification:**

cwolejsza

2003-Jul-18 11:21

Latest status: NASA is to take responsibility for the NPP and NPOESS to WSC IDC's (Two documents). The NPP version has been issued in draft, and is moving through the CCB process. (It should be noted that this document is still listed as a SSPR document. This needs to be fixed.)

Relative to the hardware architecture: the latest word is that WSC has decided to re-design their interfaces between the two sites, and will free up capacity suitable for the NPOESS application. This decision was, in part, influenced by work done by Jennifer Trotta, of Raytheon, to provide information concerning alternative hardware solutions.

The review process for this comment is not complete

**Record ID** 506

**Submitted:** 217/2003-May-28 11:11

**IPT:** IDPS

**Criteria:** Technical/OPSCONs and Architectures

**Inclination:** Strength

**Original Comment:**

SSPR has been slow to develop the Mission Support Data Server (MSDS) portion of their architecture even after much prodding from the IPO. This has resulted in a very ill-defined ancillary data plan which puts one of the systems critical Information Exchange Requirements at risk. Additionally, the SSPR agreement with NESDIS for NESDIS to collect and provide all ancillary data to the MSDS puts NESDIS in the middle of the ancillary data delivery plan. This effectively takes the responsibility off the contractor to collect ancillary data and could be used as an excuse for failure to meet EDR quality. The reason given was that NESDIS already has agreements in place to get this data does not hold water. The SSPR has ample time to negotiate necessary agreements with outside agencies to get the data they need to produce quality EDRs.

**Review - Accept: - jmulligan - line 321 2003-Jul-10 14:17**

**Record ID** 507

**Submitted:** 451/2003-May-28 12:48

**IPT:** C3

**Criteria:** Management/Management Processes

**Inclination:** Strength

**Original Comment:**

The Raytheon C3S team conducted element level Preliminary Design Audits and rolled them up to a Segment Level PDA. There was no contractual obligation for Raytheon to conduct such a set of reviews but they established the following criteria which includes successful CDR risk reduction.

"The goal of this PDA, and the lower level reviews is to:

Solicit program-wide input on the C3S design

Integrate the element-level and subsystem-level design activity

Ensure design consistency across the segment

Ensure a successful CDA/dCDR in Sept/Oct 2003 by identifying issues / deficiencies early"

The IPO and NGST participated in these audits and found them to be very valuable as a means of understanding the work accomplished since ATP. Mark Sargent and Randy Barnhard deserve credit for going the extra mile to conduct these reviews!

**Review - Accept: - vhubenko - line 321 2003-Jul-10 21:09**

Mark Sargent and Randy Barnhard deserve credit for going the extra mile to conduct element PDAs, even though there was no contractual obligation to do so. The reviews highlight one of the benefits of SSPR- Increased Government insight.

**Record ID** 509

**Submitted:** 389/2003-May-30 09:31

**IPT:** Systems Test and Evaluation

**Criteria:** Management/Intra and Inter IPT Communication

**Inclination:** Strength

**Original Comment:**

On 7 May 2003, Sandra Ketchledge of Raytheon, Aurora (SI IPT), hosted a meeting with AFOTEC and the IPO (ST&E IPT) to seek a deeper understanding of OPSCON scenario development. Questions from AFOTEC centered on review and feedback opportunities with respect to the OPSCON scenarios development. Sandra's suggested AFOTEC be added to the distribution for stakeholder reviews of draft scenarios, which are a normal part of the scenario development process. AFOTEC and the IPO (ST&E IPT) were also briefed of the OPSCON scenario development process including the weekly/bi-weekly scheduled and ad hoc telecons that any stakeholder may attend.

Sandra's preparations were thorough and well targeted to AFOTEC concerns. The day was professionally arranged to maximize the value to the NPOESS team. She had the right people in attendance as additional presenters and Q&A resources to effectively resolved AFOTEC questions on the spot to the satisfaction of all. Following the OPSCON presentations, she coordinated opportunities to meet with other Raytheon team members with questions for AFOTEC

on logistics and interoperability. This led to discussions with Sid Skornia (GS O&S IPT) on two AFOTEC Giver/Receiver items that AFOTEC was not aware of. The identification of these giver/receiver items resulted in a more complete understanding of required taskings and fostered vital communication contacts among internal NPOESS IPTs and external agencies.

**Review - Accept: - Benjie - line 321 2003-Jul-14 08:27**

**Record ID** 511

**Submitted:** 495/2003-May-30 13:00

**IPT:** Ground Segment

**Criteria:** Technical/Hardware, Software, and Algorithm Design

**Inclination:** Strength

**Original Comment:**

The IDPS and C3 segments have both provided excellent technical data in the form of preliminary drawings of the the NPP/NPOESS complement of equipment scheduled for installation at the NOAA Satellite Operations Facility (NSOF). The NOAA NSOF project team has requested detailed information pertaining to rank layouts and elevations, along with the associated power, cooling, and structural requirements, and preliminary floorspace layouts of the operational areas. The NGST/Raytheon team has provided this information on time and in a format that is easy to understand by all parties involved with the NSOF project. The feedback received from the other NESDIS agencies has all been positive.

**Review - Accept: - mkelly - line 321 2003-Jul-14 15:48**

**Record ID** 513

**Submitted:** 130/2003-May-30 13:29

**IPT:** Systems Test and Evaluation

**Criteria:** Technical/Test, Verification, and Cal/Val

**Inclination:** Strength

**Original Comment:**

NGST very proactive in scheduling visits to the four major centrals to discuss NPOESS Cal/Val status, to sensor/algorithm development/testing, Cal/Val planning and Cal/Val infrastructure build-up, as well as other items of mutual interest. These type of visits and discussions should pay real dividends as the SSPR team addresses future decisions.

**Review - Accept: - Benjie - line 321 2003-Jul-14 08:30**



**Record ID** 518  
**Submitted:** 157/2003-Jun-05 15:59  
**IPT:** Systems Engineering and Integration  
**Criteria:** Technical/OPSCONs and Architectures  
**Inclination:** Strength

**Original Comment:**

The SSPR contractor did an excellent job in obtaining knowledgeable support for the precision orbit determination opscon. The meeting gave us an understanding of the difficulty in arriving at an accurate determination and that there could be a significant technical impact on the spacecraft's design.

**Review - Accept: - dedwards - line 321 2003-Jun-25 09:59**

**Record ID** 519  
**Submitted:** 157/2003-Jun-05 16:18  
**IPT:** Systems Engineering and Integration  
**Criteria:** Technical/OPSCONs and Architectures  
**Inclination:** Weakness

**Original Comment:**

The baseline system opscons are lacking the necessary control flow to indicate what would happen under anomalous conditions. They are adequate for understanding interfaces, but inadequate for the detailed development of the interface specifications that could handle error conditions at this time. By NPOESS system CDR, the SSPR will have all the necessary information in the documents. By the delta NPP CDR, they will not be adequate for the ground segment which may cause system instability that will take time to work out during testing.

**Review - Accept: - dedwards - line 321 2003-Jun-25 10:00**

**Record ID** 520  
**Submitted:** 157/2003-Jun-05 16:21  
**IPT:** IDPS  
**Criteria:** Technical/OPSCONs and Architectures  
**Inclination:** Strength

**Original Comment:**

I am impressed by the effort that IDPS personnel are going through to produce an excellent conops. They have detailed discussions of the processing flow within the segment and

respond to comments and update the opscon document on a regular basis.

**Review - Accept: - jmulligan - line 321 2003-Jul-10 14:17**

**Record ID** 521

**Submitted:** 157/2003-Jun-05 16:33

**IPT:** C3

**Criteria:** Technical/OPSCONs and Architectures

**Inclination:** Strength

**Original Comment:**

The C3 opscon is making progress for the NPP delta CDR. There are many scenarios that still need to be included in the opscon document to make it complete, but their progress for May was good and many of the error handling conditions are being filled in.

**Review: - vhubenko 2003-Jul-10 21:29**

Neal, good comment. Would you please give me your opinion on how they did for June as well?

**Clarification:**

nbaker

2003-Jul-11 09:18

During June, the opscon scenario for SMD was updated with the information from the Ball NPP review. Issues are still being worked. The error handling portions of the opscon are still need further work and may not be ready for the design audit in September. NGST systems integration needs to reflect the latest C3 opscon in the System Opscon - making it difficult for the SMD thread lead to analyze for missing functions and links. Overall, I am still impressed on the amount of effort C3 IPT is placing on the scenario work.

**Review - Accept:**

vhubenko 2003-Jul-14 12:02

C3 opscon is making progress for the NPP delta CDR. NGST systems integration still needs to reflect the latest C3 opscon in the System Opscon - making it difficult for the SMD thread lead to analyze for missing functions and links. Overall, we are still impressed with the amount of effort C3 IPT is placing on the scenario work.

**Record ID** 523

**Submitted:** 456/2003-Jun-05 17:00

**IPT:** GO&S

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

**Original Comment:**

An ILSWG Meeting was held on Jun 3-5, 2003. This meeting resulted in considerable progress as follows:

- 1.) Ground O & S support replan related TDBOE's were evaluated in a face to face setting which resulted in a better understanding and general IPT concurrence.
- 2.) The Ground O & S replan was reviewed in detail and most problems/questions were resolved.
- 3.) Planning for the ILS Conference was a major agenda item. Deficiencies were identified in the draft ILS Conference agenda and major changes were recommended. A revised agenda is being developed by Raytheon with IPT input.

**Review - Accept: - mlee - line 321 2003-Jun-17 09:53**

**Record ID** 524

**Submitted:** 393/2003-Jun-11 08:45

**IPT:** ILS

**Criteria:** Management/Management Processes

**Inclination:** Strength

**Original Comment:**

ILS Manager Evaluation for the month of May:

The Contractor\''s (NGST/Raytheon) O&S IPT continued to work in the NPOESS replan and at the same time continue developing the Integrated Logistics Support (ILS) strategy for the NPOESS lifecycle. To continue working on the replan and the ILS strategy simultaneously (because of limited staff) has been a difficult task for the contractors. However, both tasks are being done simultaneously in preparation for the upcoming ILS conference (currently scheduled for August 5-6/2003).

Many ILS issues surfaced during the month of May; technical documentation management, software support, Maintenance - Software - Documentation - Property Management Matrixes/data bases, establishment of contractor support, facilities, Logistics Management Information (LMI) system, Enterprise Management and the agenda for the ILS conference. All issues were addressed in turn and either resolved or are on the way of being resolved. The O&S IPT has been very successful at solving ILS issues.

This NPOESS O&S IPT is the most proactive contractor team I have encountered during my career.

**Review - Accept: - mlee - line 321 2003-Jun-17 09:54**

**Record ID** 525

**Submitted:** 393/2003-Jun-11 10:14

**IPT:** ILS

**Criteria:** Management/Management Processes

**Inclination:** Strength

**Original Comment:**

Integrated Logistics Support Working Group (ILSWG)  
Meeting of June 3-4/2003

During the June 3-4/03 ILS Working Group meeting (attended by 23 Government/Contractor persons) the NGST/Raytheon contractors covered a lot of new ILS issues.

Great progress was made in the following ILS areas:

- o The maintenance matrix
- o The software maintenance matrix
- o The documentation matrix
- o The documentation plan
- o The Centralized Logistics Management (CLM) philosophy
- o The ILS conference agenda
- o The Logistics Management Information (LMI) system

It was agreed at the ILSWG meeting to redo the ILS conference agenda. The new plan is for the ILS managers to be the prime briefers and to do it by ILS elements rather than by NPOESS segments. This This is a much better approach that will make the ILS conference flow better.

**Review - Accept: - mlee - line 321 2003-Jun-17 09:54**

**Record ID** 526

**Submitted:** 533/2003-Jun-12 16:57

**IPT:** Spacecraft

**Criteria:** Technical/Trade Studies and Analysis

**Inclination:** Strength

**Original Comment:**

Although NGST has not identified a focal point for the system level trades and performance requirements associated with use of the GPS constellation, the responsibility for such GPS services such as: spacecraft position, spacecraft timing, POD support (altimetry) and Occultation measurements (supporting TEC and SESS EDRs) is being examined, albeit slowly. A variety of personnel have touched the issue peripherally, but it has not solidified into a comprehensive, cross IPT engineering support understanding. The effort is still commendable considering the forethought being applied across disciplines and the early identification of this issue should not be lost.

Solution: This is one issue that would benefit from more

System Engineering effort on the trades studies and attention by other IPTs attention, especially with the long lead time to secure space qualified or qualifyable GPS receivers supporting all NPOESS mission areas.

**Review - Accept: - vchambers - line 321 2003-Jun-12 17:04**

**Record ID** 527

**Submitted:** 533/2003-Jun-12 17:04

**IPT:** Spacecraft

**Criteria:** Management/Meeting Preparation

**Inclination:** Strength

**Original Comment:**

Jim Nelson and his team did a great job presenting data for the 1394 ECP 3 Fact Finding Meeting. The info he presented was exactly what we asked for and in many cases the changes that had been done cooresponded to government concerns ahead of the game. Appears that he is on top of 1394, knowing exactly where he is regarding actuals vs plan. The format of his presentation (all data available in a spreadsheet) should be the model for all other change proposals. Bravo!

**Review - Accept: - vchambers - line 321 2003-Jun-12 17:04**

**Record ID** 530

**Submitted:** 378/2003-Jun-17 09:06

**IPT:** System Engineering

**Criteria:** Technical/Performance

**Inclination:** Weakness

**Original Comment:**

NGST is not following its own criteria for Algorithm CCB (ACCB) process. For example, one of the functions of the ACCB process is to deliver 'verified science algorithm' code. The SE IPT has the responsibility to ensure that 'Wicket 2' process has been conducted.

NGST 'Wicket 2' process involves the following main tests:

- Perform additional assessments of the science algorithms with more exhaustive test data sets across a more comprehensive parameter space. This additional independent verification should ensure that all requirements for the SDR and EDR products are met under realistic and comprehensive test conditions.
- Exercise the science algorithms with a suite of test data that covers the requirements and includes all common geophysical conditions
- Ensure that the algorithm must have a clear path to meeting

all performance requirements for SDR and EDR products within the required range of geophysical conditions

- In the event that an algorithm fails to meet the above criteria, “rework” of the algorithm may be necessary. A detailed plan for the rework is developed under the direction of the SE Science Team. Following algorithm rework, the Wicket 2 algorithm verification process is repeated.

So far NGST has failed to provide (a) What additional assessments have been done? (b)

What ‘more exhaustive data’ has been used to cover a more comprehensive parameter space? (c) How the testing conditions have been made realistic and comprehensive? (d) How all possible geophysical conditions have been realized and where are results showing that this algorithm meets all those stratification conditions? (e) In case the algorithm failed to meet wicket 2 criteria, what is the mitigation scheme, how and when it will be implemented?

At the last pre-ACCB meeting, Dr. Jeff Prevette ( a GSFC/NASA scientist) asked if any stratification was performed to Vegetation Index EDR ( Note that VI index was topic of this ACCB), he was told that stratification was not part of ACCB process. This is a clear lie or ignorance of Wicket 2 process.

#### **Review - Accept: - jamess - line 321 2003-Jul-10 07:49**

The ACCB allowed the Veg Index EDR (and others) to pass with minimal additional testing, data sets, testing conditions, and stratification as required by their wicket 2 criteria.

**Record ID** 532

**Submitted:** 392/2003-Jun-17 15:50

**IPT:** Systems Test and Evaluation

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

#### **Original Comment:**

NGST STE personnel has worked truly within the spirit of SSPR during this Replanning process. We have weekly telecon meetings on the STE replanning and had two Face-to-Face meetings as well to iron out detail information cases by the changes in the schedule. Together, we have worked hard to make sure that we agree and fully understand the changes.

#### **Review - Accept: - Benjie - line 321 2003-Jul-14 08:29**

**Record ID** 533

**Submitted:** 425/2003-Jun-17 17:09

**IPT:** Payload

**Criteria:** Technical/Interface Control Documents

**Inclination:** Weakness

#### **Original Comment:**

Lack of response in providing information needed for the NPP VIIRS ICD; there is sound and fury to remedy this, but have not seen the evidence as of this writing.

NGST does not allow instrument contractor personnel to support TIMs and meetings away from the contractor facility: a March I&T TIM at Ball was not attended by instrument contractor personnel, the Ball CDR was not attended by instrument contractor personnel. The lack of attendance at the I&T TIM somewhat defeated the purpose of the TIM, which was to allow instrument contractors to see the test facilities and accommodations for the instruments and supporting GSE.

General comment: there continues to be very limited insight and participation by NASA personnel in VIIRS activities. There was essentially no NASA participation in the VIIRS baselining activities and there has been no NASA participation in the VIIRS replanning activities. NASA is generally only invited to the most visible and usually high level meetings (TIMS, quarterlies, formal or major reviews).

(Submitted on behalf of John Galloway)

**This comment has not been reviewed**

**Record ID** 535  
**Submitted:** 425/2003-Jun-18 16:40  
**IPT:** System Engineering  
**Criteria:** Technical/Interface Control Documents  
**Inclination:** Weakness

**Original Comment:**

Lack of Mature Ground ICDs for dCDR/MCDR for NPP

The maturity level will likely be inadequate to meet a successful dCDR/MCDR for NPP in October 2003. The ICDs, particularly IDPS, will be incomplete based on the incremental build definition which has external interfaces allocated to Build 1.3. This build is planned/scheduled post-dCDR. The IMS states 'baseline' ICD tasks will be complete for dCDR event and the Contract Implementation Plan (CIP) states 'Completed ICD for NPP Interfaces' will required products for the dCDR event.

While the lateness of the ICD development/completion has been recognized, the impact to being able to convene successful reviews, meeting the required products/criteria, and coordinating development/facility schedules and plans with the external interfacing entities is a concern. There is as if yet no structured workoff plan to ensure the interfaces are cooperatively developed.

**Review - Accept: - dedwards - line 321 2003-Jun-25 10:01**

**Record ID** 536  
**Submitted:** 451/2003-Jun-19 16:50

**IPT:** C3

**Criteria:** Management/Responsiveness

**Inclination:** Strength

**Original Comment:**

Raytheon hosted a telecon today (6/19) with the IPO and with critical participation from NGST. The topic was to explain to the IPO why the NPOESS FVS schedule and costs changed so much due to the replan. This was one of two issues Victor briefed that needed resolution from the 16 Jun IPT Re-plan presentation.

In less than 30 minutes, NGST was able to explain both the source of the changes and the resulting increase in costs. This information should have been included in a BOE for the WBS that contains this work, but the 30 minutes was well spent in a dialogue that resulted in a deeper understanding.

**Review: - vhubenko 2003-Jul-10 21:11**

Who from NGST and Raytheon provided this beneficial insight, Mike? Please be specific with names. Otherwise, Excellent comment, both content and quality.

**Clarification:**

MWenkel

2003-Jul-11 15:20

Ellen was the critical NGST person - she leads the FVS effort. Raytheon just hosted the discussion - Kevin Landon. Ellen walked us through the "was" and the "is" with explanation that C3S was slipping work due to more expensive space segment acceleration costs, i.e., C3S was taking a bullet in the FVS re-plan on behalf of the larger program and FY07 funding limitations.

**Review - Accept:**

vhubenko 2003-Jul-14 12:00

In less than 30 minutes in a telecon, Ellen Ryan, NGST, was able to explain both the source of the changes and the resulting increase in costs for FVS. This time was well spent in a dialogue that resulted in a deeper understanding.

**Record ID** 537

**Submitted:** 456/2003-Jun-23 18:11

**IPT:** GO&S

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

**Original Comment:**

Major accomplishments during this reporting period include the development of costs, DT s, BOEs , and briefings related to the re-plan. NGST and Raytheon team members worked



long hours - developing these documents in a timely manner. Contractors provided briefing materials and support documents which were factual and complete. The subsequent presentations were well received by IPO Management.

**Review - Accept: - mlee - line 321 2003-Jun-26 07:22**

**Record ID** 538

**Submitted:** 398/2003-Jun-24 12:58

**IPT:** FO&S

**Criteria:** Management/Meeting Preparation

**Inclination:** Strength

**Original Comment:**

After months and months of talk, O&S will finally have their first MOWG related meeting. Terry Watson has taken the lead to set up the meeting with NASA, as well as, solicate inputs and establish an agenda. The pre-MOWG meeting will be held 1 Jul.

**Review - Accept: - mlee - line 321 2003-Jun-26 07:21**

**Record ID** 539

**Submitted:** 369/2003-Jun-24 14:42

**IPT:** Spacecraft

**Criteria:** Management/Meeting Preparation

**Inclination:** Strength

**Original Comment:**

Item: Spacecraft Replan Meeting in LA

Action: Peter Quast provided innovative and more complete presentation.

Impact: Use of color coding and animation made it easier to understand reasons for "inefficiencies" compared to other presentations.

Redo of first comment.

**Review - Accept: - vchambers - line 321 2003-Jul-09 18:24**

**Record ID** 540

**Submitted:** 369/2003-Jun-24 15:00

**IPT:** Spacecraft

**Criteria:** Management/Meeting Preparation

**Inclination:** Strength

**Original Comment:**

Item: GPS operational requirements and SAASM requirement result in a risk due to paucity of SAASM compliant GPS receivers.

Action: Peter Quast has shown initiative in working trade study issues and researching potential solutions for the NPOESS GPS requirements.

Impact: Potential risks for Precision Orbit Determination performance for NPOESS altimeter have been uncovered. Options for GPS implementation are better understood and risk is being addressed.

**Review - Accept: - vchambers - line 321 2003-Jul-09 18:23**

**Record ID** 541

**Submitted:** 374/2003-Jun-25 09:54

**IPT:** Systems Integration

**Criteria:** Management/Risk Management

**Inclination:** Strength

**Original Comment:**

Suggest Rating - Fully Satisfied

Two Risk Management Board [RMB] meetings have been held in this period [5/7/03 and 5/28/03]. The April meeting did not take place because Risk Manager was on jury duty. At the 5/7 meeting, the new risk management tool was used for the first time. The tool has 'Opportunity' feature which allows the identification and tracking of 'ideas' that could possibly save time and money. Several items, including one suggested by the IPO, were placed in this feature. Raytheon is using their internal CCB process to approve their Risk Handling Plans. Due to a misunderstanding on Raytheon's part, Raytheon thought that their system level Plans did not have to be approved by RMB. This has been corrected. However, the fact that the IPO had to point this out is considered a negative.

The 5/28 RMB was, in my opinion, the first meeting that discussed specific detailed risk areas. Thus, it met the criteria.

**Review - Accept: - dedwards - line 321 2003-Jun-25 10:02**

**Record ID** 543

**Submitted:** 495/2003-Jun-25 13:55

**IPT:** C3

**Criteria:** Technical/Interface Control Documents

**Inclination:** Strength

**Original Comment:**

The DHN and DMR elements of C3S have done an outstanding job supporting the NSOF telecom design effort. Colin Connor has provided detailed information regarding the number and type of communications circuits needed into/out of and within the facility. He has also provided complete listings and elevations of the NPOESS telecom equipment to be installed at NSOF. All of this work has been done in response to requests from the NSOF project office and Colin has met or exceeded their suspenses for this information.

**Review - Accept: - vhubenko - line 321 2003-Jul-10 21:32**

Colin Connor met or exceeded the NSOF project office suspenses for comm infrastructure information. This is only one example of the outstanding support Colin provides.

**Record ID** 547

**Submitted:** 379/2003-Jun-25 17:36

**IPT:** FO&S

**Criteria:** Cost/Program Changes

**Inclination:** Weakness

**Original Comment:**

During the current replan the pricing function under Raytheon Business Operations has lagged significantly behind the IPT planning process leaving the IPT to guess if they had meet fiscal year funding targets or not. The pricing process does not reaction fast enough during a replan based on meeting fiscal year funding targets to support IPT decision making. This inability to react to planning changes meant the old planning numbers were briefed at the mid-term review instead of the latest. Since this not the last program replan a more responsive estimating process is needed. I discussed the problem with Raytheon Business Operations repeatedly with no change in the process.

**Review - Accept: - mlee - line 321 2003-Jun-26 07:16**

**Record ID** 549

**Submitted:** 379/2003-Jun-25 17:41

**IPT:** IDPS

**Criteria:** Cost/Program Changes

**Inclination:** Strength

**Original Comment:**

During the current replan the pricing function under Raytheon Business Operations has lagged significantly behind the IPT planning process leaving the IPT to guess if they had meet fiscal year funding targets or not. The pricing process does not reaction fast enough during a replan based

on meeting fiscal year funding targets to support IPT decision making. This inability to react to planning changes meant the old planning numbers were briefed at the mid-term review instead of the latest. Since this not the last program replan a more responsive estimating process is needed. I discussed the problem with Raytheon Business Operations repeatedly with no change in the process.

**Review - Accept: - jmulligan - line 321 2003-Jul-10 14:08**

**Record ID** 551

**Submitted:** 379/2003-Jun-25 18:10

**IPT:** IDPS

**Criteria:** Cost/Program Changes

**Inclination:** Strength

**Original Comment:**

Raytheon Business Operations has not shown the ownership of the replan process that is expected of the integrator of the Raytheon portion of the proposal. Cost Account Managers (CAMs) at Raytheon have not understood that this replan is not to fix problems from the original proposal or to get well. Even after Raytheon had submitted its final pricing runs to NGST, it was changing pricing runs because of facility rates for the non Aurora business units. Raytheon needs to establish clear rules and enforce discipline in the process.

**Review - Accept: - jmulligan - line 321 2003-Jul-10 14:08**

**Record ID** 552

**Submitted:** 379/2003-Jun-25 18:24

**IPT:** IDPS

**Criteria:** Cost/Program Changes

**Inclination:** Weakness

**Original Comment:**

NGST Business Operations has not shown the ownership of the replan process that is expected of the integrator of the total proposal. After Raytheon submitted their final pricing runs to NGST, I asked NGST to coordinate on the pricing numbering I had received from Raytheon to ensure that the IPO, Raytheon and NGST all had the same numbers for the IPO only briefing. After several calls to NGST Business Operations, NGST had Raytheon Business Operations call me and confirm the Raytheon numbers. No was able to explain how Raytheon could confirm what NGST had in the system. NGST showed no ownership of their process or the resulting pricing numbers.

**Review - Accept: - jmulligan - line 321 2003-Jul-10 14:08**

**Record ID** 556  
**Submitted:** 282/2003-Jun-27 13:14  
**IPT:** IDPS  
**Criteria:** Technical/Hardware, Software, and Algorithm Design  
**Inclination:** Strength

**Original Comment:**

Both DMS and INF SIs were able to achieve all required Build 1.1 functionality with approximately half the amount of code originally estimated. DMS reduced code reuse from 5400 lines to 811 lines and new code from 9600 lines to 6519 lines, for a total reduction from 15000 to 7330 lines. Similarly, INF reduced code reuse from 1500 lines to 443 lines and new code from 8100 lines to 4732 lines, for a total reduction from 9600 to 5175 lines. The total reduction for IDPS Build 1.1 was from 24600 lines to 12505 lines.

The beneficial effect of these code reductions is that (assuming future builds go according to plan) there will be less code to be maintained for the life of the program.

**Review - Accept: - jmulligan - line 321 2003-Jul-10 14:13**

**Record ID** 559  
**Submitted:** 534/2003-Jun-30 09:31  
**IPT:** Spacecraft  
**Criteria:** Management/Risk Management  
**Inclination:** Strength

**Original Comment:**

thru June 30,2003  
Progress is being made in the enhancement of the eclipse software which will be used with the EEMTB to reduce I&T risk. The major modification of the the eclipse software is to enable it to talk to test sets (as well as operational sets). Some of the costs with this development are shared with other NGST programs and funded with R&D funds.

**Review - Accept: - vchambers - line 321 2003-Jul-09 18:15**

**Record ID** 560  
**Submitted:** 534/2003-Jun-30 09:37  
**IPT:** Spacecraft  
**Criteria:** Management/NPP Program Support

**Inclination:** Strength

**Original Comment:**

thru June 30,2003  
Coordination work is being made in NPP SIIS and Instrument Aquisition from an I&T perspective. NGST has taken the lead in the development of the giver/receiver list for NPP program.

**Review - Accept: - vchambers - line 321 2003-Jul-09 18:16**

**Record ID** 566

**Submitted:** 447/2003-Jul-06 17:27

**IPT:** IDPS

**Criteria:** Technical/Requirements Derivation

**Inclination:** Weakness

**Original Comment:**

The contractor team has not made or updated fundamental analyses needed to perform detailed requirements derivation. Specifically, we do not know the anticipated incidence rates for various types of anomalies, such as spacecraft failures, outages, anomalies, or other non-nominal situations (e.g., orbit maneuvers); missed passes and link drop-outs; terrestrial comm failures; loss of mandatory ancillary data with acceptable quality; and local ground equipment and facilities failures. Because the individual contributions to data loss have not been quantified, the benefits for alternative remediation approaches cannot be quantified. Are those in the current baseline adequate? Do we need more? Which ones? Also, we cannot predict the statistical completeness of initial products, or compare them with improvements which might be available at the delivery threshold, or compare them with improvements which might be available "eventually". Without this information, data product users cannot plan intelligently. In particular, we don't know how often we can expect to deliver 100% complete, correct granules.

**Review - Accept: - joverton - line 321 2003-Jul-11 15:15**

**Record ID** 567

**Submitted:** 447/2003-Jul-06 17:49

**IPT:** IDPS

**Criteria:** Technical/Requirements Derivation

**Inclination:** Weakness

**Original Comment:**

Data rate and processing estimates continue to be anecdotal, and preliminary flow-down analysis continues to be accepted

uncritically, without consideration of reasonableness or life-cycle cost.

Data rate estimates include very large contributions from geolocation without considering methods for data reduction, and from intermediate flags without considering utility or compression techniques.

Processing estimates continue to be based on crude algorithms, without allowance for the additional processing required to incorporate fully automated operation, robustness, graceful degradation, and the overhead associated with LUT generation.

Without this information, we cannot reach a proper CDR-level hardware sizing, assure that delivery KPPs will be met, or finalize the ICDs.

**Review - Accept: - jmulligan - line 321 2003-Jul-10 14:20**

**Record ID** 569

**Submitted:** 480/2003-Jul-07 13:31

**IPT:** Management

**Criteria:** Management/Shared Ownership

**Inclination:** Neutral Observation

**Original Comment:**

Many hours invested by Myles Otomo and the Data Sharing Oversight Counsel (DSOC) and the IT teams at all locations produced a relatively painless transition to a tool with greater capability and future utility. Most IPTs had their eRooms set up well in advance of the cutover date. The new eRooms seem no more difficult to use for the data sharing function than JEDI. The expected 'speed bumps' are few, and we expect continued improvement as users become more familiar with eRoom and its extensive capabilities.

**Review - Accept: - dfurlong - line 321 2003-Jul-08 09:03**

STRENGTH. The transfer to E-rooms from Jedi shows NGST/Raytheon trying to improve the communications on the program

**Record ID** 570

**Submitted:** 480/2003-Jul-07 13:42

**IPT:** Management

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

**Original Comment:**

Sending the NGST NPOESS IT lead, Mike Crist, to conduct the JointEDI to eRoom training showed top management attention to the migration to this more capable data sharing and collaboration tool. His training sessions targeted all levels with concentration on IPO senior management and

support personnel. A second set of training sessions was scheduled as a result of the three days of sessions in June. We welcome the authoritative and helpful assistance.

**Review - Accept: - dfurlong - line 321 2003-Jul-08 09:05**

**Record ID** 571

**Submitted:** 365/2003-Jul-07 13:42

**IPT:** Security

**Criteria:** Management/Resource Allocation

**Inclination:** Strength

**Original Comment:**

Original Comment:(Chris Pate)

I have reviewed materials for ECR-036. I don't believe that that NGST has binned 8500 requirements properly. To date the requirements do not properly reflect the A&O contract "was" condition for these requirements, per PM IPT presentation last Friday. The NPOESS "was" condition is a result of multiple locations within the A&O contract, see list below...not just 5200 (that was superseded by 8500). Please see Path: >>IPT\_Working > Level 3 - System Engineering > Briefings > SecurityWorking Group > 05-28-2003.

As part of the "was" NPOESS data security requirements, please consider the following references per A&O contract.

Key security references are contained within the following locations of the

- a) Section H-586 clause,
- b) CDRL A-007,
- c) IMP Section 2.12,
- d) System Spec. Section 3.2.8.4 [SYS018200/SYS018300/SYS018400] ,
- e) DD-254, Sec 13 item b, f & g and
- f) NSTISSP No 12 dealing with National Information Assurance (SYS017210 (System Specification Section 3.2.8.1), and SYS017300.

Skip has done a SLADE trace and found several items that have no flow down, e.g. 5200.40.

M. Sorrells Review (4 June 03)

Concur that SSPR has not fully demonstrated requirement flowdown of the baseline [pre-8500] security requirements to date. These baseline requirements may already be within the flowdown, but may not be evident by using a simple "security" word search. Recent discussions with Bill Hutchinson and Mike Worden, indicate that they are treating these baseline requirements as a minimum security threshold, and will reflect this process, including requirements flowdown, in an updated Security Implementation Plan (SIP) NLT 1 Aug 03. I recommend we hold off on forwarding this weakness through NOAAForge until we get the updated SIP, if it's not in there, then we submit as a weakness.



## M. Sorrells Review (2 July 03)

SSPR is still in process of defining their security baseline [pre-8500 security requirements], which is now their number 1 priority. As the security baseline is defined, requirements are being vetted through the Requirements Working Group via ECR to ensure they are being captured in the requirements flowdown to the segment level. Through numerous shoulder-to-shoulder discussions, the SSPR, through the Security Working Group (SWG), is also reviewing security requirements that are mandated by local Site Certification & Accreditation (C&A) processes and deriving requirements not captured by IPO identified or site C&A guidance.

The SSPR's plan for any 8500 requirements, or at least the ones plan to comply with and are not already captured as part of the original security requirement baseline [pre-8500 security requirements], is to incorporate them into an updated SIP v.2 [referred to as Baseline Plus (+)]. Unfortunately, capturing these unique 8500 requirements will delay the SIP v.2 until mid December.

The IPO has several concerns

- 1) Definition of the pre-8500 security requirements [baseline] is still not complete
- 2) Defining new [Baseline Plus (+)] security rqmts from 8500 should not be done prior to defining [Baseline ] security rqmts.
  - SSPR/SWG is slowly coming around on this issue (Don't want a security rqmt labeled as new if it should have been addressed as part of [Baseline] security rqmts.)
- 3) Timing of these security requirement definitions, as currently scheduled, runs a high risk that security induced design impacts (if any) will not be known until after NPP's October 1.3 final build (May require different design between NPP and NPOESS)

The SSPR SWG has done several things to mitigate above concerns

- 1) Made [Baseline] security definition their number one priority
- 2) Brought Bill Hutchison now on board in SWG to help facilitate security issues

Counter Response: (Pate)

NGST/Raytheon progress on this item is running out of time. Several major IMP events and major program milestones (IMS) are about to happen without the security posture of the data network defined. Please see my earlier e-mails on this subject, but as of today NGST/Raytheon are NOT in compliant with the provisions of the A&O contract.

NGST/Raytheon has had more than adequate time to define the network security posture. The "was" position under 5200 is still not defined and the 8500 impact has been overstated to the tune of \$106 M.

One of the causes for this current situation is due to man power limitations in SI/Specialty Engineering ...a NGST choice...this was acknowledged per a conversation with Bill Hutchinson and Colleen Katz at the last SWG telecon on 6/30!

I believe this item is in the "red" condition. I am still looking for NGST senior management to react and place resources against this critical item.

I believe that the following concrete steps should be taken: a)

network security should be raised and tracked formally by the Risk Management board at the program level b) either the SIP v2 deliver which IPO can agree to should be accelerated to August '03 delivery or the Raytheon's Software BAR 1.3, C3S's CDA, and the program level NPP Delta CDR should be postponed until they are all synchronized.

**Review - Accept: - MSorrells - line 321 2003-Jul-07 14:14**

First - This comment was inadvertently labeled as a Strength (should have been a weakness)

Second - This comment would be more appropriate under Security/Technical?Requirements Derivation Criteria

Description of Criteria

Derived requirements are complete, well defined, accurate, and updated in a timely manner.

Concur with comments that SSPR has not adequately demonstrated flowdown of security requirements (prior to the new 8500 derived requirements).

The SSPR SWG has done several things to mitigate above concerns

1) Made [Baseline] security definition their number one priority

2) Brought Bill Hutchison now on board in SWG to help facilitate security issues

However, even with the above efforts, it does not look as though security requirements will be defined and updated in a timely manner (i.e. for NPP 1.3 BAR) to impact NPP design. Risk that security may drive an NPOESS design change that is different from NPP.

**Record ID** 572

**Submitted:** 365/2003-Jul-07 13:44

**IPT:** Security

**Criteria:** Management/Resource Allocation

**Inclination:** Weakness

**Original Comment:**

Original Comment:

Raytheon has been working long and hard to resolve the system security issue created when the 5200 regulations went away and were replaced by 8500.1 & .2. The SSPR has it in their head that the IPO has directed them to determine how they will implement 8500 and to that end have gone down the path to cost out a system-wide implementation. This I believe was never the intent of the message sent out by John Inman. The question was basically what was the worst case impact could 8500 have on the system. It has always been the SSPR responsibility to ensure we had a secure system that would meet latency and quality requirements. We gave them the DoD 5200 regulations as guidance. The question we just can't get answered is "what was the overall security plan to get the system site accredited when using the 5200 guidance and what is the plan to get site accreditation now that the DoD has put out new guidance."

Instead of answering this question we continually get we'll give you a ROM and then there's talk about an ECP. We are not even sure they had worked out a plan to get to a secure, acceptable system and now we are already dealing with an ECP. To the best of my knowledge the SSPR has not directly contacted all of the Central's site DAA's to ask the questions necessary to determine what the system will be judged against. It appears the SSPR is depending on the IPO to make these contacts for them and are looking for the IPO to mandate security regulations for them to follow. The IPO should not do this. The government will evaluate their security at the Centrals but the IPO put itself in the position where the SSPR can say "look we did what the IPO said to do and it didn't work." The SSPR needs to contact the DAA's, determine what they will require no matter what regulation is it and then develop their security plan to match the C&A requirements.

M. Sorrells Review (2 July 03)

See 2 July comments above

During 1 July telecom with SSPR/SWG, I raised the following concerns

1) IPO does not have a good understanding of what the security plan, requirement flowdown, design impacts, etc. was prior to 8500/BASELINE PLUS (+) considerations. We need to have a clear understanding of what the BASELINE is, or was going to be, (including their C&A plans) and what the deltas are for BASELINE PLUS (+), prior to developing ROMS and ECPs. (They may have it, but it is not evident to the IPO...however, it appears the current requirement definition process is uncovering holes)

2) Schedule: IPO and other SSPR IPTs don't feel comfortable that current schedule is sufficient to affect in NPP design changes (Build 1.3, the final NPP build, is currently scheduled for this Oct and SIP V.2 is not slated to be finished until Dec). The concern here is that this process may uncover a security driven design change that may not be incorporated into NPP design.

3) SSPR needs to be more proactive in making security decisions vs. waiting for IPO direction. The IPO is not the security expert. However, IPO does want to be informed of decisions and have opportunity to provide feedback as necessary.

4) There needs to be more direct and frequent coordination between the Site DAAs and the SSPR. The IPO will assist SSPR on any issues they cannot resolve themselves. (Apparently it was a misunderstanding on SSPR/SWG's part that they thought the IPO wanted to take the lead on this effort. Now that they understand their role, they've tasked CSC to coordinate directly with the local Site DAA's (including the non-NPP ones) and keep IPO informed.)

**Review - Accept: - MSorrells - line 321 2003-Jul-07 15:53**

SSPR is working hard to resolve evolving security requirements (i.e transition from 5200 to 8500). They are working hard to define security requirements baseline (i.e .pre 8500 change) to make it easier to identify deltas such as 8500 and upcoming evolving security requirements.

Unfortunately the security requirement baseline development

is behind NPP design schedule and, without additional resources, run the risk for not being used to impact NPP designs.

The risk is that these security design impacts may only be incorporated into NPOESS resulting in a design that differs from NPP.

Again, SWG is aware of this concern, but may not have enough resources to turn the corner in time to affect NPP design.

**Record ID** 577

**Submitted:** 556/2003-Jul-07 15:11

**IPT:** Software

**Criteria:** Technical/Hardware, Software, and Algorithm Design

**Inclination:** Strength

**Original Comment:**

The Northrop Grumman Software Development Plan is currently being updated with an expected approval date of early Fall 2003. Even though the CDRL will not be approved for several months, its provisions are already in effect. The current software development effort is making appropriate progress, is substantially following the SDP-defined process, and is being monitored and controlled in accordance with the SDP. While it would be optimum to have the SDP already approved, the risk to the Program of having the SDP still "in process" is low. Both Northrop and Raytheon software development efforts are being led by experienced software management. There is active and strong Software Quality Assurance oversight at both contractors and the Government is very involved in all of the development activities.

**This comment has not been reviewed**

**Record ID** 578

**Submitted:** 526/2003-Jul-07 16:42

**IPT:** Spacecraft

**Criteria:** Management/Shared Ownership

**Inclination:** Strength

**Original Comment:**

The Spacecraft IPT did a very good job in keeping the IPO team informed and involved during the re-plan process. Our Face-to-Face meeting went very smoothly due to the coordination and communication before-hand, as well as the open and candid communication during the meeting.

**Review - Accept: - vchambers - line 321 2003-Jul-09 18:03**

**Record ID** 582

**Submitted:** 358/2003-Jul-08 14:29

**IPT:** Payload

**Criteria:** Management/Management Tools

**Inclination:** Strength

**Original Comment:**

During the payload offsite, one sensor team briefed us all on a tool they have begun to use to get their sensor under control. This concept, a weekly wall walk where each IPT's progress is displayed, provides an at a glance view of progress/problems and helps the sensor team focus on areas of potential problems and fix them prior to actually becoming problems. It has also created a sense of esprit-de-corps among the team as individual IPTs compete in a good way and try and help others when they get behind so that the overall sensor continues to improve. EVMS data since the inception of this concept has shown a dramatic improvement with both schedule and cost showing steady and maintainable improvements. This concept is a very valuable strength.

Recommend the Payload IPT establish this as the norm to help other sensors, especially those struggling in EVMS, get back on track or at least right their ships.

**This comment has not been reviewed**

**Record ID** 587

**Submitted:** 382/2003-Jul-10 00:28

**IPT:** Management

**Criteria:** Management/Responsiveness

**Inclination:** Weakness

**Original Comment:**

NGST did not perform to the replan schedule that was agreed upon prior to the beginning of this Award Fee period. In late June (after the midterm), senior management notified the IPO PM IPT members that they could not submit the contract replan proposal as scheduled on 2 July because of two items: 1) two development sensor subcontractors were late delivering their respective proposals and 2) an unanticipated \"upper\" in production cost estimates that was not yet understood. NGST plans to submit a proposal in early August, date TBD, and has continued to have the level 2 and 3 IPTs conduct \"shoulder to shoulder\" fact finding of the replan BOEs, task descriptions, and lower level IMs. Lack of Level 1 integration of the BOEs and TDs into an \"understandable\" across-system insight into the development of the replan proposal has slowed the progress of Level 1 IPT fact finding.

IMPACT: IPO has limited /vague reporting of Replan progress and less confidence in cost estimates used to supply information to EXCOM decision makers. The lack of hard proposal values and accompanying insight into the details behind the totals has stressed the IPO reporting process, limited their flexibility, and weakened budget positions. This could lead to flawed program budgeting inputs to the respective agency Program Control and Financial Management functional groups.

**Review - Accept: - dfurlong - line 321 2003-Jul-10 10:13**

**Record ID** 588  
**Submitted:** 447/2003-Jul-10 07:43  
**IPT:** IDPS  
**Criteria:** Management/Shared Ownership  
**Inclination:** Strength

**Original Comment:**

The contractor team has an insufficient number of domain-aware analysts to properly flow requirements and implement the system. While people may be bright and eager, the requirements process has been bogged down when the contractor is not able to properly interpret high level requirements in the context of the operational and scientific environmental communities. Specific examples recently have been time systems, coordinate systems, units for reporting results, calibration processes and needs, algorithmic integrity, and graceful degradation. In each case, the contractors have come to the IPO for clarification or confirmation of an interpretation, then waffled about the implications. Sometimes they have shopped around for confirmation of the easy solution, or delayed while trying to seek consensus from users. One person who understands is always better than a committee of people who don't.

**Review - Accept: - joverton - line 321 2003-Jul-11 15:09**

**Record ID** 589  
**Submitted:** 358/2003-Jul-10 11:26  
**IPT:** System Engineering  
**Criteria:** Technical/Hardware, Software, and Algorithm Design  
**Inclination:** Strength

**Original Comment:**

The SE IPT has updated and refined the EDR Interdependency Report (Version 1.1 dated 10 July 2003). Emphasis was placed on NPP related EDRs, but attention was also given to the overall system (for example, the NPP wiring diagram was a completed product, the NPOESS wiring diagram was a work in progress). This was the correct approach to take at this stage of the program.

The EDRIR is an excellent tool for finding information on what a sensor produces and how it does it, what each EDR entails and what is needed to get from a RDR to an EDR, and what other products are produced along the way (Intermediate Products). The document also lists ancillary data required for the EDRs as well as back up data where required. This data is also stratified (good, better, best) for

graceful degradation purposes.

One of the more interesting portions of the EDRIR is the predecessor/successor tables. With these tables, an individual can trace the path of the data and better understand why a product is produced when it is. These are essential for IDPS design and operation.

The team has also given extra detail for the algorithms that have already been "dropped" to IDPS. It is expected that the EDRIR will remain dynamic with this level of detail provided as each drop occurs.

Ta-Yung Chu and team are to be commended for taking data from the well used Red Book and other sources and updating it to this report. The report has a good index and I was able to bounce around in it and find what I was looking for with little problem. In addition, if you read it on line, you can hyper jump to other documents due to thier hyper text linkages.

**Review - Accept: - jamess - line 321 2003-Jul-14 07:16**

**Record ID** 591

**Submitted:** 151/2003-Jul-10 13:32

**IPT:** Payload

**Criteria:** Cost/EVMS Data

**Inclination:** Weakness

**Original Comment:**

The NGST CMIS management team should be adding value to the BSS CMIS EVMS data (CPR, Format 5) reported to the IPO. Up to this point, however, it has mostly been a pass-through. We have had a few conversations where I have asked for more information. NGST had added more info initially, but it was not enough, in my opinion. Most recently, in the May submittal, NGST's contribution was minimal. I spoke with Nick Ingrao on this topic and said he would update the submittal. He has done this, but I have not seen it yet.

What we (IPO) want to see is NGST's honest comentary on BSS's submittal. Do they agree with it? Is it just a difference of opinion, or something more substantial. Do they have a better corrective action than BSS suggests? Those kinds of data would be helpful to the IM's

**This comment has not been reviewed**

**Record ID** 592

**Submitted:** 447/2003-Jul-10 14:06

**IPT:** IDPS

**Criteria:** Management/Shared Ownership

**Inclination:** Weakness

**Original Comment:**

Making decisions based on cost expedience has replaced proper technical evaluation, and increases performance risk.

For example, most MODIS algorithms were developed for smaller swath width (~1400 km) and higher line-of-sight view than applies to the VIIRS swath. The Integerized Sinusoidal projection (ISIN) was adopted for gridded intermediate products because it free and easy to integrate, but despite the fact it is no longer supported by the community.

The contractors need to critically evaluate heritage components available to the program for suitability, not just convenience. Where any question exists about the science, engineering, or operational attributes, the contributions should be evaluated and shortcomings must be fixed.

**Review - Accept: - joverton - line 321 2003-Jul-11 15:10**

**Record ID** 593  
**Submitted:** 447/2003-Jul-10 14:10  
**IPT:** IDPS  
**Criteria:** Management/Risk Management  
**Inclination:** Weakness

**Original Comment:**

Planning for calibration continues to lag behind the needs of the IDPS (and other) developers.

This is a risk whose origin is shared between the IPO and the SSPR. The contractors have not determined calibration requirements to meet EDR performance, available calibration techniques and resources, calibration techniques and resources to be developed under the program, mission-specific calibration tools requirements, or shortcomings. In effect, we are proceeding with a level-of-effort approach, and hoping for the best.

The contractor needs to flow the SDR and EDR requirements to calibration requirements, and flow those in turn to calibration tools, resources, and data needs. The contractor needs to be explicit about assumptions, especially regarding assumptions about work to be done by others. Schedule and resource requirements need to be established.

**Review - Accept: - joverton - line 321 2003-Jul-11 15:08**

**Record ID** 617  
**Submitted:** 124/2003-Jul-11 10:33  
**IPT:** C3  
**Criteria:** Technical/Interface Control Documents  
**Inclination:** Strength

**Original Comment:**

Mr. Mark B. Hyde is providing outstanding support in our



NSOF Facilities working groups, including the Relocation Working Group, the Cross Cutting Working Group, and the Telecommunications Working Group. He is proactive and thorough in his preparation for, and participation in the working groups. Mark anticipates the information the groups needs, and gathers it prior to the meetings. He then gets the right people together to immediately address questions and concerns that arise during the course of the meeting. His and the NPOESS Team's clear responses and descriptions of why we have certain requirements has gained the respect and support of the NSOF Facility Team. Mark and the C3 and IDPS folks supporting the NSOF design and construction process have provided critical information and requirements that are being implemented, ensuring that the NSOF will be built to support our program throughout our projected life cycle and will provide robust support well into the future. I greatly appreciate Mark's support and that of the entire team in proactively moving forward to ensure we bring the NSOF on line to fully support our program.

**Review - Accept: - vhubenko - line 321 2003-Jul-11 14:27**

Mr. Mark B. Hyde is providing outstanding support in our NSOF Facilities working groups, including the Relocation-, Cross Cutting-, and Telecommunications Working Groups. We greatly appreciate Mark's support and that of the entire team in proactively moving forward to ensure we bring the NSOF on line to fully support our program.

**Record ID** 618

**Submitted:** 102/2003-Jul-11 12:00

**IPT:** IDPS

**Criteria:** Technical/OPSCONs and Architectures

**Inclination:** Strength

**Original Comment:**

Milt Pannas gave a good briefing of the IDPS architecture at the July IDPS face to face. This was the first briefing I have seen from IDPS since I have been involved in the program that presented information in such a way that I could begin to understand the technical trade spaces within the system. Milt should be commended.

**Review - Accept: - joverton - line 321 2003-Jul-11 15:11**

**Record ID** 620

**Submitted:** 102/2003-Jul-11 12:21

**IPT:** IDPS

**Criteria:** Technical/OPSCONs and Architectures

**Inclination:** Weakness

**Original Comment:**

The Algorithm software development process currently in place features a "Science" Software baseline managed by SE, and an "Operational" Software baseline managed by IDPS, which starts from a "drop" of the "Science" baseline, and then diverges.

Both baselines will evolve, with the Operational baseline supposedly staying synchronized with the algorithmic content of the science baseline.

This process has the potential for being extremely costly in insidious ways - there will be the continuous low level work of determining the relationship of changes in one baseline against code in the other that has already been changed.

In today's world of configuration management software and networks there is no excuse why science and operational versions of the code are not branches of a single code base that all parties work against.

**Review - Accept: - joverton - line 321 2003-Jul-11 15:13**

**Record ID** 621

**Submitted:** 392/2003-Jul-14 02:48

**IPT:** Systems Test and Evaluation

**Criteria:** Management/NPP Program Support

**Inclination:** Strength

**Original Comment:**

Jerry Huller (Raytheon) worked with NPP on a weekly basis to coordinated the Giver-Receiver list. Additionally, NGST and Raytheon supported NPP CDR.

**Review - Accept: - Benjie - line 321 2003-Jul-14 08:28**

**Record ID** 622

**Submitted:** 392/2003-Jul-14 02:53

**IPT:** Systems Test and Evaluation

**Criteria:** Management/Meeting Preparation

**Inclination:** Strength

**Original Comment:**

NGST and Raytheon has been prepared for all IPT meetings, Face-to-Face meetings, Cal/Val meetings, and meetings supporting other segments.

**Review - Accept: - Benjie - line 321 2003-Jul-14 08:28**

**Record ID** 623

**Submitted:** 392/2003-Jul-14 03:02

**IPT:** Systems Test and Evaluation

**Criteria:** Technical/Test, Verification, and Cal/Val

**Inclination:** Strength

**Original Comment:**

The development of the Cal/Val Manuals are on schedule. The Oat's community has been briefed on the status of the development of the Cal/Val Manuals and the Oat's comments are being addressed.

**Review - Accept: - Benjie - line 321 2003-Jul-14 08:31**

**Record ID** 624

**Submitted:** 451/2003-Jul-14 13:20

**IPT:** System Engineering

**Criteria:** Management/Intra and Inter IPT Communication

**Inclination:** Strength

**Original Comment:**

SMD Data Storage and Playback Trade. Although this trade apparently was conducted without IPO participation, the Problem statement and option trade space was well defined. Rigorous pro's and con's were developed across a waterfall of functions that spanned sensor to spacecraft to C3S processing.

Selected option was well justified on performance and cost.

Probably the best executed trade package conducted to date.

**Review - Accept: - jamess - line 321 2003-Jul-15 15:01**

**Record ID** 625

**Submitted:** 690/2003-Jul-15 08:55

**IPT:** System Engineering

**Criteria:** Management/Change Management Process

**Inclination:** Weakness

**Original Comment:**

On 25-26 June, I reviewed the NGST System Specification, Revision F, dated 10 June 2003 that was supposedly ready for release. I compared it to the list of approved CCRs that were on the Record of Changes page. I noted the following discrepancies and sent them to John Francisco. He developed a spreadsheet of them and his planned corrective actions.

Title page: Why dated 10 June vice future date of release?

P. ii Rev./Change Record, Rev. F: "ECR 008A" vice "ECR 008)

P. xviii, last line: delete last "s" in "Classificationss" (& on P. 214 in Table 70.6.4 title)

P. 13, 3.1.4.3, line 1: delete first "system"

P. 21, 3.2.1.2.7, line 1 "For the purpose of..."

P. 46, 3.7.1.2.10, title and line 4: "Aerosol Polarimetry..."

P. 47, SYS026940, line 3: "...or equal to 60..."

P. 49, SYS021070: add "." after "equipment"

P. 56, 3.7.3.11.1, line 4: delete "a" after "enable"

P. 74, Coastal, line 2: word missing after "300"

P. 74, Communications Security: NOTE is incomplete

P. 82, Mean Down Time denominator: "downing" vice "drowning"

P. 87, On-orbit Design Life, line 3: word(s) missing after "capable of..."

P. 88, Other Test, line 1: "...that may be..."

P. 88, Other Test, line 3: delete "a" in "isa" & add "," after "effective"

P. 90, Real-time Telemetry, line 1: "...to/from..."

P. 91, Satellite Storage Life, line 1: "...time from completion of..."

P. 92, Stored Telemetry, line 1: "...telemetry to/from..."

P. 93, line 1: confusing statement "...parts whichparts, which is..."

P. 94, Test item failure, line 3: delete "8" in "determ8ined"

P. 94, Unit, line 2: delete first "item" in "itemitem"

P. 125, 40.3.1.3, para 2, line 1: "This EDR..."

P. 132, 40.4.1, para 2, line 1, "This EDR..."

P. 133, 40.4.2, para 2, line 1, "This EDR..."

P. 150, 40.7.3, line 1: "...clear for..."

P. 151, 40.7.5, NPP Exclusion: move "X" from -10 to -8

P. 169, 40.5.5: "(Top of Atmosphere)" vice "(TOA)"

P. 170, 50.2, #8: "Ozone Total Column/Profile"

P. 25, 3.2.1.4.3.6, SYS004940: Proposed text of ECR 009 is not included: "The System shall maintain operational and residual satellite relative phasing that minimizes conflicting ground receptor contacts."

P. 21, 3.2.1.2.7, SYS001930: add ", section 50.2 of this specification" after "Appendix E" (ECR 012 row 55)

P. 110, 40.2.2-20, 40.2.2-23, & 40.2.2-29: the phrase "(NPP is Surface to 0.5 mb)" is listed under the "Specified Value, CrIMSS & CMIS" column in ECR 024C App. D Proposed Changes vice in the "Subject" column. Does it matter where the phrase is listed?

P. 171, APS: "...Polarimetry..."

P. 171, BMMC: add "...is superseded by SMMC" (ECR 015B)

P. 171, CMIS: "...Imager Sounder"

P. 172, CrIS: "...Infrared Sounder"

P. 174, NPOESS: "...Operational Environmental..."

P. 174, OMPS: "...Mapping and Profiler..."

P. 175: add "SMMC Schriever Mission Management Center" (ECR 015B)

NGST Configuration Management reviewers need to be more diligent in ensuring that a document has all of its errors corrected prior to its release.

Steve Goldhammer

**Review - Accept: - jamess - line 321 2003-Jul-15 14:59**

**Record ID** 626

**Submitted:** 380/2003-Jul-15 12:59

**IPT:** System Engineering

**Criteria:** Cost/Performance Measurement Baseline

**Inclination:** Strength

**Original Comment:**

This IPT has been very active in maintaining performance measurement baseline on a weekly basis during this period. The business operations support maintains a very detailed set of spreadsheets that track the financial performance of each cost account and compare actuals to predicted values. This task has been complicated during this period because the IPT must maintain two sets of data, one for the IBR baseline and one for the re-plan.

The spreadsheets have become the primary tool for managing the IPT's finances in near real time. The Contractor Performance Report is essentially a confirmation of what we already know.

**Review - Accept: - jamess - line 321 2003-Jul-15 14:55**

**Record ID** 627

**Submitted:** 380/2003-Jul-15 13:00

**IPT:** Systems Integration

**Criteria:** Cost/Performance Measurement Baseline

**Inclination:** Strength

**Original Comment:**

This IPT has been very active in maintaining performance measurement baseline on a weekly basis during this period. The business operations support maintains a very detailed set of spreadsheets that track the financial performance of each cost account and compare actuals to predicted values. This task has been complicated during this period because the IPT must maintain two sets of data, one for the IBR baseline and one for the re-plan.

The spreadsheets have become the primary tool for managing the IPT's finances in near real time. The Contractor Performance Report is essentially a confirmation of what we already know.

**Review - Accept: - dedwards - line 321 2003-Jul-16 08:52**

**Record ID** 628

**Submitted:** 380/2003-Jul-15 13:01

**IPT:** Systems Test and Evaluation

**Criteria:** Cost/Performance Measurement Baseline

**Inclination:** Strength

**Original Comment:**

This IPT has been very active in maintaining performance measurement baseline on a weekly basis during this period. The business operations support maintains a very detailed set of spreadsheets that track the financial performance of each cost account and compare actuals to predicted values. This task has been complicated during this period because the IPT must maintain two sets of data, one for the IBR baseline and one for the re-plan.

The spreadsheets have become the primary tool for managing the IPT's finances in near real time. The Contractor Performance Report is essentially a confirmation of what we already know.

**Review - Accept: - Benjie - line 321 2003-Jul-16 00:53**

**Record ID** 630

**Submitted:** 380/2003-Jul-15 13:28

**IPT:** Systems Integration

**Criteria:** Cost/IPT Financial Management

**Inclination:** Weakness

**Original Comment:**

This IPT is struggling with understanding their IBR baseline especially in the cost accounts associated with interface development (1.5.1.2.3 & 1.5.1.2.4). There has been significant personnel turnover in these cost accounts and also in the IPT leadership. Rather than trying to understand and adapt the current planning and earned value methodology, these cost accounts have decided to completely revamp these efforts for follow-on rolling wave activities with the effect of losing a level of traceability back to the original plan.

This lack of knowledge has also been demonstrated with poor understanding of why the cost accounts are underrunning cost significantly. The underruns are below the CPR reporting level so they have not required a variance analysis submission. However, when we ask questions as to why these cost accounts are experiencing CVs on the order of 50% in some months, they cannot provide a well founded explanations. Their standard response is that these problems will be corrected once the new planning methodology is implemented in the replan.

**Review - Accept: - dedwards - line 321 2003-Jul-16 08:52**

**Record ID** 632

**Submitted:** 245/2003-Jul-15 14:20

**IPT:** Management

**Criteria:** Rollover/Rollover

**Inclination:** Weakness

**Original Comment:**

Subject:

Re: Rollover Award Fee

Date:

Mon, 07 Jul 2003 15:12:41 -0400

From:

"David.Furlong" <David.Furlong@noaa.gov>

To:

"Kolesar, Tom" <tom.kolesar@ngc.com>, Terry Larson <terry.larson@trw.com>, Jim Unland <Jim.Unland@trw.com>, John Inman <john.inman@noaa.gov>, "Goodrich, James" <James.Goodrich@trw.com>

CC:

Tom.Bucher@noaa.gov, hal.bloom@noaa.gov, john.inman@noaa.gov, "Havens, Bill" <bill.havens@ngc.com>,"Chappel, Brian" <brian.chappel@ngc.com>,"Ricker, Fred" <fred.ricker@ngc.com>

References:

1

Tom

The Criteria Roll-over Team (CRT) did get off to a good start with the 23 May report to the PM IPT. The offsite was successful in pointing out the communication challenges that we have in the P/L area. The same challenges are also present in the overall program, but since the payload work is further along it showed itself first there. The offsite did result in several successes which need to be documented. The writing of a charter from each instrument team which was signed by each member. Discussion on the current communication challenges in the P/L IPT. How will the sensor subs be brought into the improvements we were trying to achieve. And finally we need to write some type of metrics that can be used to show progress has been made and we have an approach which will prevent the same problems in the future. As part of the NGST mid term self evaluation, you may want to brief the progress to date and the plan for the remainder of the period.

David Furlong  
Dep.ADA

"Kolesar, Tom" wrote:

> Tom,

>

> As you may recall, this was a topic at a PM IPT meeting several weeks ago. I believe Dave Furlong agrees with me when I say that the plan we briefed to the PM IPT back on (I believe) May 23 is THE plan. Since then, we have been executing to the actions in that document. We have sent out a survey, and we held a 1.5 day Payload data gathering and team building event with the IPO in Denver in early/mid-June. Actions from that meeting are currently being worked off and are forming the basis for recommended changes that will be made to the

Payload organization (and its processes and operations) later this month and into August. We are on track to our plan.

>

> When the subject of the plan last came up, I thought Dave Furlong was going to look into from the Government's end (i.e., take steps to get the May 23 briefing accepted/approved as our formal plan). Alternatively, we discussed having Jim Unland send a formal letter to the IPO with the plan to satisfy the requirement issue you have raised.

>

> I will get with Dave on Monday to determine how he would like to close out this issue. (I know Dave is taking 3 consecutive weeks off this summer. Could you please tell me if he is currently out? If he is, I will work the issue with Hal).

>

> I personally see no reasons why the award fee rollover money should be put in jeopardy at this time.

>

> Tom Kolesar

>

> P.S. You correctly cited the fact that, early on, we did need to engage NGST training/HR for assistance. However, this assistance was not needed to create the plan, it was needed to flesh out the details to successfully conduct the Payload offsite. Based on all of the feedback I have received, I believe we can claim the offsite was indeed a success.

>

>

>

> -----Original Message-----

> From: Tom Bucher [mailto:Tom.Bucher@noaa.gov]

> Sent: Thursday, July 03, 2003 8:14 AM

> To: Kolesar, Tom

> Cc: David Furlong; Hal Bloom; John Inman

> Subject: Rollover Award Fee

>

> Tom,

> The AFRB will have their mid-term evaluation on 24 Jul. That will also

> be the time for NGST to brief the self evaluation. The subject of the

> rollover will be an item of interest and there are several actions that

> we agreed to at our last meeting that require some attention.

> First and foremost is a rollover plan that we all agree with and that

> can be included in the contract file for audit. This, as we discussed,

> does not have to be a lengthy document but it should be an agreement

> between us that when the actions laid out in the plan are completed

> satisfactorily we will release the funds. This plan should be the

> centerpiece of your brief to the AFRB.

> I know that you had some details to work out with your HR before you

> submitted the plan. If that action is still incomplete we could provide

> a simple status to AFRB and execute the plan at a later date. This may

> make the rollover unawardable in this period.

> Please let me know what course of action you intend to follow or if you

> need any assistance.

> Thanks,

> Tom



**Review - Accept: - dfurlong - line 321 2003-Jul-15 14:21**

**Record ID** 633  
**Submitted:** 380/2003-Jul-15 15:48  
**IPT:** Systems Integration  
**Criteria:** Cost/Program Changes  
**Inclination:** Neutral Observation

**Original Comment:**

Strength: The NGST IPT lead and his designated replan lead took the time to fly to the IPO and go over their replan proposal. This was a usefull session and identified several areas that required further research. The Cost Account Manager's and business operations specialist from this IPT also supported 2 days of in depth fact finding and were very forth-coming in thier discussions.

Weakness: The OPSCON basis of estimate as written does not adequately explain how the replan estimate was arrived at. This weakness is offset by the fact that the OPSCON CAM and NGST lead both traveled to the IPO to further discuss their estimating methodology. The problem with this approach is that the real estimating methodology will not make it into the proposal due to lead time restrictions on when proposal documentation can be submitted

**Review - Accept: - dedwards - line 321 2003-Jul-16 08:53**

**Record ID** 634  
**Submitted:** 380/2003-Jul-15 16:19  
**IPT:** System Engineering  
**Criteria:** Cost/Program Changes  
**Inclination:** Strength

**Original Comment:**

During the replan, several questions surfaced concerning a subcontract to Raytheon's speciality engineering cost account (151142). Raytheon was very responsive in providing all of the pertinent subcontract documentation in a timely manner. This enabled a through and timely govt evaluation of the effort.

**Review - Accept: - jamess - line 321 2003-Jul-16 08:42**

**Record ID** 635  
**Submitted:** 245/2003-Jul-16 07:29  
**IPT:** Security

**Criteria:** Management/Resource Allocation

**Inclination:** Weakness

**Original Comment:**

- SSPR has not fully demonstrated requirement flowdown of pre-8500 (baseline) security requirements to date. (Weakness)  
-- Focus on "new" 8500 security requirements detracted from from above effort  
-- Due to lack of traceability insight, unable to determine "true" requirement delta between baseline and "new" security requirements  
-- Concern that definition of all security requirements is not on a fast enough timeline to affect NPP design  
--- Current schedule for security requirement definition completion is mid-Dec while NPP design is scheduled to be finalized in Oct.

- Until recently, the SSPR appears to have waited for IPO direction on security matters (Strength)  
-- SSPR has heeded this concern and is now taking initiative on deriving security requirements, implementing safeguards, and contacting DAAs

From Markus Sorrels via e-mail

**This comment has not been reviewed**

**Record ID** 636

**Submitted:** 245/2003-Jul-16 09:55

**IPT:** Management

**Criteria:** Cost/Cost Control

**Inclination:** Strength

**Original Comment:**

Verbal Comment from John Cunningham during the 0800 Senior Staff on 14 July 2003

The efforts to control cost by NGST on thier subcontracts has been a mixed results.

ITT cost control has been working with significant technical progress also

SBRS still has challenges in both area of cost control and technical areas.

Hal  
Does this comment look OK. I got the initial thought from Cunningham. You may want to include specifics.  
Dave

**Review - Accept: - dfurlong - line 321 2003-Jul-16 10:25**

**Record ID** 637  
**Submitted:** 380/2003-Jul-16 10:11  
**IPT:** Systems Test and Evaluation  
**Criteria:** Cost/Program Changes  
**Inclination:** Strength

**Original Comment:**

NGST and Raytheon have been proactive in soliciting and incorporating IPO feedback into their portion of the replan proposal. They have scheduled a series of face to face meetings to explain draft proposal inputs and provide a forum for the IPO to provide their comments. They have responded to factfinding requests with a high level of thoroughness that has lead to our complete understanding of a very complex staffing and scheduling environment. Specifically, the Raytheon test lead conducted an intensive analysis to explain how test personnel were allocated between ST&E and the O&S IPT. This relationship was complicated by the changed satellite build schedule. The test lead took time out of a busy travel schedule to sit down with the IPO and explain his analysis. His efforts led to an identification of 2000 manhours for elimination from the replan and allowed the IPO to conduct its own analysis from a common understanding of the current baseline and what is required for the replan.

**Review - Accept: - Benjie - line 321 2003-Jul-17 23:04**

**Record ID** 638  
**Submitted:** 380/2003-Jul-16 10:20  
**IPT:** Systems Test and Evaluation  
**Criteria:** Cost/EVMS Data  
**Inclination:** Strength

**Original Comment:**

During the IBR process, the IPO identified several "watch list" items that could potentially lead to problems but were not at a level of concern to warrant action items. It would have been very easy for NGST and Raytheon to allow these items to "fall off the radar" as other concerns such as the replan became the focus of the ST&E management team. To their credit, the NGST and Raytheon IPT leadership actively solicited feedback from the IPO on these issues and attempted to incorporate recommendations into the new "rolling wave" of detailed IMS and EVM planning. The impact of this effort will be a more reliable EV data and an easier to follow audit trail for any variances analyses that may be required as the program progresses.

**Review - Accept: - Benjie - line 321 2003-Jul-17 22:54**

**Record ID** 642  
**Submitted:** 425/2003-Jul-17 17:02  
**IPT:** Systems Integration  
**Criteria:** Management/NPP Program Support  
**Inclination:** Strength

**Original Comment:**

NGST Refusal to Add Ball Identified Items to Giver/Receiver List

The Giver/Receiver Lists were initially developed to track the informal exchange of information between the various organizations prior to a more formal document (e.g. ICD) being available. Ball and NASA have worked cooperatively with NGST and IPO to develop these lists during the first nine months of the contract. Prior to the NPP S/C CDR (June 2003), the Instrument - S/C ICDs were identified as being deficient. A recovery plan was developed which included prioritized lists of items about each sensor interface needed to mitigate the impact to the Ball S/C development. Several requests were made by both Ball and NASA to add these items to the Giver/Receiver Lists. NGST has refused to do so claiming the Giver/Receiver Lists are now being used as input to their Integrated Master Schedule and therefore should not be added because they are too low level. While the use of the Giver/Receiver Lists as a driver to the NGST IMS may be beneficial, it was not the original intent and should not interfere with the original intent. Failure of NGST to accommodate the NASA/Ball requests provides an example of reluctance to work in a peer-to-peer relationship. NGST has offered to track these items separate from the Giver/Receiver Lists but the visibility is not the same.

(Submitted on behalf of D. DeVito)

**This comment has not been reviewed**

**Record ID** 645  
**Submitted:** 425/2003-Jul-17 18:09  
**IPT:** Systems Engineering and Integration  
**Criteria:** Management/NPP Program Support  
**Inclination:** Weakness

**Original Comment:**

Lack of NPP Coordination of OMPS Contamination Requirement Change

It was recently identified to the BATC Spacecraft Contractor that the OMPS contamination requirement for the NPP Spacecraft will go from 50 A to 10 A. NPP is required to meet OMPS Contamination Control Plan from Dec 1998 (50 A spacecraft allocation). The OMPS CCP Rev A, released

3/4/03 was received by BATC for review in May 2003 (the requirement went from 50 A to 10 A). NGST claims there is no change to NPP from the last OMPS review, although the documentation trail indicates otherwise.

It is unclear what NGST control the sensor contamination control plans are under. The change from 50 A to 10 A is now considered by NGST as baseline although this change was never formally boarded by any ERB/CCB with GSFC/NPP involvement. These documents do identify spacecraft-sensor interfaces and changes can impact the spacecraft design, therefore applicable to the Contract Clause H-509 c).

(Submitted on behalf of L. Shears)

**This comment has not been reviewed**

**Record ID** 646  
**Submitted:** 425/2003-Jul-17 18:44  
**IPT:** Systems Engineering and Integration  
**Criteria:** Management/NPP Program Support  
**Inclination:** Weakness

**Original Comment:**

Delayed Review Process of CrIS Request for Increased Survival Heater Power

CrIS ISCR submitted 3/31/03. Concurrently, NASA submitted comparable change proposal to NPP ERB which has been consistently deferred awaiting NGST disposition of ISCR. NGST trade study presentation held 7/11/03 only addressed how NPOESS satellite would accommodate increased power without any pushback on CrIs request or consideration of impacts to NPP. No trade schedule completion was provided. NASA's understanding is that ITT is proceeding as if the change has been accepted. Being post NPP S/C CDR, accommodating this change will have a major impact NPP S/C. The handling/dispositioning of this change is/was time critical and should be subject to Clause 509c for NPP sensors.

(Submitted on behalf on W. Anselm)

**This comment has not been reviewed**